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ABSTRACT

A selection of presentations made during the twenty-fifth Educational Communications Convocation is included in this summary. Some 1700 educators concerned with innovation in educational communications and technology participated; presentations took the form of research reports and demonstrations on developments and techniques of interest to teachers, directors, supervisors and administrators of educational communications. Major topics found within the scope of the conference included: educational media, communications in education, the use of television for educational purposes, the individualization of instruction through technology, instructional development, the relationship of teaching and technology, the use of films in education, instructional materials centers, and New York State Regents policy on instructional technology. In addition an exhibit sponsored by over 125 commercial groups displayed the latest educational equipment and materials. (Author/PB)

Communication and Educational Redesign

New York State
Educational
Communication
Association

Convocation
Reports

Grossinger
Grossinger, N.Y.

November 1972

New York State Educational Communication Assoc.

1972

Dear Colleague:

The twenty-fifth Educational Communications Convocation was held at Grossinger's Hotel, November 7-10, 1972. The meeting was jointly sponsored by the New York State Educational Communication Association and the Division of Research and Educational Communications.

The theme of the Conference was "Communication and Educational Redesign." Wilbur S. Edwards, Chief Executive Officer of F. E. Compton Company was the keynote speaker on "The Communications Revolution Updated." Gordon M. Ambach, Executive Deputy Commissioner of Education, New York State Education Department, presented the Regents Policy Paper on "Instructional Technology."

About 1700 educators who are concerned with innovation in educational communications and technology participated in the conference. Presentations included research and demonstrations on developments and techniques of interest to teachers, directors, supervisors and administrators of educational communications. An important part of the program was an exhibit ov over one hundred twenty-five commercial members who displayed and demonstrated the latest educational materials and equipment.

A selection of presentations made during the Convocation are included in this summary. Not all programs are reproduced in this report since many of them were visual and of a workshop nature; other presentors did not submit a manuscript.

We hope this Conference Report will be valuable to you as a record of the Convocation. The Convocation coordinator was Dalton Levy; the Program chairman was Frank Del Bosco. Liaison with the State Education Department was through Carl E. Wedekind and Raymond Graf. Catherine Bailey prepared the manuscript for publication.

We cordially invite your participation in the 1973 Educational Communications Convocation.

Sincerely,

Richard Hubbard

Dr. Richard Hubbard
President

COMMUNICATIONS CONVOCATION

TWENTY-FIFTH ANNIVERSARY

PROGRAM

Grossinger's, New York — November 7-10, 1972

COMMUNICATION AND EDUCATIONAL REDESIGN

GENERAL PROGRAM

Tuesday - November 7

2:00 p.m. REGISTRATION

3:00 p.m. HOSPITALITY
6:00 p.m.

8:30 p.m. GENERAL SESSION
9:45 p.m. GREETING:
Theodore Henry, President

WELCOME:
Frank Del Bosco, Program Chairman

KEYNOTE SPEAKER:
Wilbur S. Edwards, Chief Executive Officer,
F. E. Compton Company
THE COMMUNICATIONS REVOLUTION UPDATED. 1

Wednesday - November 8

8:45 a.m. REGISTRATION

9:30 a.m. EXHIBITS OPEN

9:30 a.m. CONCURRENT SESSIONS
10:15 a.m.

A MEDIA WORKSHOP PLAN THAT IS BOTH MOTIVATING AND PRACTICAL . . .5
Arnold D. Tversky and Michael Pagan, Dover, New Jersey
A media workshop series for teachers was designed to provide hands-on experiences related to what is actually happening in their classrooms.

Wednesday - November 8 (continued)

10:35 a.m.
11:20 a.m.

GIVE A TEACHER $2,000.00 7
Geraldine Greenspan, Norwalk, Connecticut
A classroom teacher uses a mini-grant to individualize a social studies unit for a fifth grade.

PROGRAMMED INSTRUCTION: KEY TO INDIVIDUALIZED LEARNING 8
Dr. John E. Keshishoglou, Ithaca College
This presentation discusses the many forms of programmed instruction; identifies its characteristics such as size of step, logical progression, continuous reinforcement, and feedback; and explains how the teacher can program material for his own class.

11:30 a.m.

GENERAL SESSION
Frank Del Bosco, Program Chairman

INTRODUCTION:
Irene F. Cypher, New York University

SPEAKER:
Leo A. Soucy, Assistant Commissioner for School Services, State Education Department

2:00 p.m.
4:00 p.m.

EXHIBITS OPEN

2:00 p.m.
2:45 p.m.

CHANGING TEACHER'S BEHAVIORAL ATTITUDES THROUGH TELEVISION . . . 9
Ronald M. Braz, Freeport, New York
One of the most serious problems in education today is meaningful teacher training. This discussion will highlight the problems, techniques for teacher involvement, sample various television tapes, examine the carry over to the classroom; as well as follow up techniques to insure continued growth of the professional staff.

INSTRUCTIONAL DEVELOPMENT AND INNOVATION 11
Albert E. Beilby, Syracuse University
The organization and procedures of the Center for Instructional Development will be described with a report being given on several specific projects.

CABLE TELEVISION: ITS POTENTIAL FOR EDUCATIONAL USE 17
Bernarr Cooper, State Education Department
This discussion will revolve around the ways in which a community and any educational system, either public, private, or both, may combine efforts to make maximal use of the public access educational channels.

Wednesday - November 8 (continued)

3:00 p.m.
3:45 p.m.

PROJECT MOPPET: A MEDIA-ORIENTED PROGRAM PROMOTING EXPLORATION IN TEACHING 22
Alfred D. Kohler, Gloria Alibani, and Anne Battle, Woodbridge, New Jersey
Project MOPPET is a unique project focusing on the curriculum through the arts - fine art, music, dance, creative drama, and poetry.

YOUR TV EQUIPMENT CAN DO ANYTHING 26
David Israel, Port Washington, New York
With some inexpensive gadget, built by students in the school shops as projects, or in their homes, you can enhance and extend your utilization of the half-inch video tape recorder that may be in your district. This presentation will show some of the devices built by students at the Paul D. Schreiber High School in Port Washington, that provided versatile studio-type production. The equipment discussed will be both mechanical and electronic.

SELF-INSTRUCTIONAL MODULES FOR INSERVICE CONTINUING EDUCATION OF N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION EMPLOYEES . .37
David I. Hanselman - SUNY - College of Environmental Science Forestry at Syracuse
James E. Lesch, State Department of Environmental Conservation
In an attempt to provide a means of updating the education of employees of the State Department of Environmental Conservation and to provide a vehicle whereby employees can voluntarily enter an instructional program which will prepare them for jobs of greater responsibility, an autotutorial program has been developed.

4:00 p.m.
4:45 p.m.

MEDIA AS A MEANS OF DISCOVERING 15th-16th CENTURY CHILDHOOD . . 40
Mel Tucker, SUNY, Buffalo, New York
Through children's portraits, family portraits, and book illustrations, the historical discovery of childhood is analyzed.

HOW TO INCREASE TELEPHONE COMMUNICATIONS EFFICIENTLY 45
Robert B. Bogdanski, Cayuga BOCES
How to increase telephone communications efficiency and reduce the monthly costs which are being paid to the public telephone companies.

Wednesday - November 8 (continued)

4:00 p.m. EDUCATIONAL COMMUNICATIONS AND THE 2-YEAR COLLEGE:
4:45 p.m. 27 ASPECTS OF THE STATE OF THE ART 49
Milton Richards, Mohawk Valley Community College
A report of visits to twenty-seven 2-Year Colleges in southern and western States to obtain firsthand information about media.

4:30 p.m. EXHIBITORS' MEETING
Room 4110

7:00 p.m. DINNER (INFORMAL)
9:00 p.m. FIESTA MEXICANA

Thursday - November 9

9:30 a.m. EXHIBITS OPEN

9:30 a.m. CONCURRENT SESSIONS
10:15 a.m.

PSYCHIC TAPESTRY 55
Nancy Pulsifer, Evelyn Weir, and Kay Whidden, Brunswick, Maine
A multimedia experiment in communication that weaves a pattern of thought forms into a tapestry of time and space, form and color, signs and symbols - the alpha and omega of creativity.

THE ROLE OF TELEVISION IN A MASTERS PROGRAM IN DANCE THERAPY . . 56
Ruth Goldstein, Lynne McVeigh, and Claire Schmais, Hunter College, New York City
Television is used as an integral part of an experimental program. Video tape permits the students to see themselves in relation to others and to absorb these images visually and kinesthetically.

MAKE A SOUND 59
Vincent Zappi and Otto Schmidt, Westchester Community College
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CATALOGING EDUCATIONAL MEDIA 60
Adelaide Slater, Floral Park, New York
A brief description of the philosophy and methods of a multimedia center in a large suburban high school.

Thursday - November 9 (continued)

10:30 a.m. GENERAL SESSION
12:30 p.m. Richard Hubbard - President-elect

INTRODUCTION:
Edward Moy, Ithaca BOCES

SPEAKER:
HERE COMES TOMORROW 63
Jerold E. Kemp, President, AECT

2:00 p.m. EXHIBITS OPEN
5:00 p.m.

2:00 p.m. MULTIMEDIA HARDWARE: AN INEXPENSIVE APPROACH 65
2:45 p.m. A. C. Wagner, Staten Island, New York
A variety of effects are demonstrated in a 30-minute presentation called "Stop, Look and Listen," as an introduction to a simple manual device controlling several projectors.

3:00 p.m. TESTING TIES TECHNOLOGY TO TEACHING 71
3:45 p.m. Leslie M. Gibian, Ossining, New York
What happens in the mind of the student before, during, and after an audiovisual presentation? Test questions can stimulate thought and research.

IMC'S BY THE BAKERS DOZEN 74
Edward Moy, Ithaca BOCES

4:00 p.m. THE NEW EDUCATIONAL DESIGN IN THE TOWN OF RYE:
4:45 p.m. HUMANITIES AND ARTS 75
Howard Rubin, Rye, New York
A curriculum with emphasis on the humanities and the arts was developed when a new school was built. This presentation will indicate how this new design functions.

THE COUNTRY FARM: A LANGUAGE EXPERIENCE 77
Dorothy H. Alford, Clinton, New York
An experiment with the language experience method of teaching reading in the first grade culminates in the production of a contemporary textbook with overtones of social comments.

THE FILM EXCERPT AS A GROUP ENCOUNTER TECHNIQUE 81
Henry A. Singer, Westport, Connecticut
The excerpted film appears to be an ideal medium to use in the field of human relations. The strong emotional content, which helps to arouse emotions, provides an ideal action trigger to accelerate communications and movement within group experience setting.

Thursday - November 8 (continued)

5:30 p.m. NYSECA RECEPTION
6:30 p.m.

8:45 p.m. GENERAL SESSION
10:00 p.m. Installation of Officers: Theodore Henry, President

AWARDS AND INTRODUCTIONS:
John McCagg

SPEAKER:
Gordon M. Ambach, Executive Deputy Commissioner of Education, New York State Education Department

Topic: New York State Policy on Instructional Technology . . .86

Friday - November 10

9:30 a.m. CONCURRENT SESSIONS
10:15 a.m.

MEDIA AND THE DISADVANTAGED 92
Richard Hubbard, SUC-Oswego, New York
This program discusses the characteristics and the problem of the disadvantaged learner and how media can be used to deal with his specific disadvantages. A case study from the Utica Public Schools will be used as part of the program.

10:35 a.m. THE PRODUCTION OF A 16MM FILM ON DRUG ADDICTION BY A LOCAL
11:20 a.m. COMMUNITY 95
John J. Martin, Ridgewood, New Jersey
An instructional film that can be used as a motivational device in stimulating class discussion. It involves both the affective and cognitive domains.

LISTENING TRAINING: FACT OR FICTION 96
David M. Silverstone, University of Bridgeport, Connecticut
When it is pointed out that listening is the sense most utilized by each individual in the course of a day, it is only then that we realize the importance of listening in daily life.

EXHIBITORS 99

THE COMMUNICATIONS REVOLUTION UPDATED

by Wilbur S. Edwards
Chief Executive Officer
F. E. Compton Company

Living as we do in the midst of a Communications Revolution, most of us hardly have time to catch our breath before some exciting new development appears on the horizon. Recently, in Geneva the United Nations countries contemplating the peaceful use of atomic energy met in two buildings two miles apart linked by television signals flashed over a laser beam. The same technique has been used to provide a link between doctors in a Cleveland hospital and nurses at a prison two miles away.

Beginning in May 1973 in the Rocky Mountain States, the United States Department of Health, Education, and Welfare will sponsor a direct satellite-to-home television broadcast experiment. The satellite will be programmed for two hours a day to 500 direct-reception antennas. Of these 500 antennas, 30 will be assigned to public broadcast cable installations, 70 to colleges, 100 to libraries, 150 to public schools, and 150 to individual homes. The Office of Education has already utilized a satellite hookup among 21 remote native Alaskan villages to provide a combination of in-service teacher training and teacher-to-teacher communication. When the Rocky Mountain experiment has been completed, the satellite will be repositioned over India for the telecasting of educational programs. It took man at least half a million years to advance from voice communications to the earliest writing on clay tablets in Mesopotamia and 5,000 years to progress from the primitive clay tablets to the Gutenberg Bible. However, in just 100 years man's ingenuity has produced all the communications media we now take for granted--photography, telegraphy, high-speed printing, the telephone, radio, the phonograph, motion pictures, and television.

A television set linked to a computer tied into a CATV system and a dialing accessory can give a school or home an almost unlimited reach. We sometimes find ourselves wondering why we should settle for anything less than total access to the world's wisdoms and pleasures. It's entirely feasible for a computer which knows your individual interests to read publications and scan the films and television programs of the world and then transmit material on your favorite subject to you because it "knows" it will interest you.

As publishers of a home and school encyclopedia and precyclopedia, my associates and I are convinced that, while our publications will continue to come off the printing presses with revisions and new editions every year for a long time, the day will soon come when our printed materials will be accompanied by one or more of the fascinating electronic developments born of the communications revolution we are experiencing.

To understand some subjects, motion is required. I can read about an amoeba, I can see a still picture of an amoeba, but to fully comprehend the amoeba, I must see it under a microscope or on a film or video tape. How do plants grow? Unless you let me see via timelapse photography the seedling being transformed into a plant, I'm not likely to be as knowledgeable on the subject as I should be. My associates and I envisage the encyclopedia of the future offering a selection of video cassettes on the subjects in which motion is necessary for the transmittal of knowledge--or we'll supply a code book to enable owners to dial a communications center that will instantly project a film or video tape on those subjects on an enlarged screen in the classroom or the home.

For some time I've wished that bookstores could sell encyclopedias effectively, but with the rapidly accelerating communications revolution I'm rather glad now that they can't. The story is told of a customer who went to a bookstore and asked for a particular book. The clerk told him the book was not available but would be in a half hour. The clerk went to the rear of the store, took a cassette film off the shelf, put it into a duplicating and binding machine, and a half hour later the book was printed and ready. In fact, the system is already available and bookstores are lining up to adopt it.

Through CATV you can have 20 channels today, 40 channels tomorrow, and the day after tomorrow it will be technically possible to make as many as 80 channels available in an educational communications center or in a home. Not only is instruction via CATV possible, but through two-way communication the viewer can directly respond to test questions by simply pushing a button. I see you're having a session on cable television entitled "Prelude to an Educational Explosion." That's a terribly exciting title, and maybe an educational explosion is precisely what cable television will make possible.

In Hollywood and in New York you can see demonstrated a fantastic new editing system. More than 80% of today's prime time television shows and nearly 90% of all television commercials are produced on film because of the difficulty in doing rapid creative post-production editing with video tape--but that's a thing of the past now. Using only a light-pen, an editor can instantly select and review exact edit points on video tape. His decisions are stored in a computer processor for instant replay for final assembly. The light-pen eliminates the need for all pushbuttons, switches, knobs, levers, etc. The editor simply selects the scenes and uses them at normal, slow, or fast speeds and in forward, reverse, or still frames. Dual monitors allow the editor to view scene exit and entry positions at the same time. With the light-pen, he then makes splices, dissolves, fades, and insertions at will. These edit decisions can be rearranged, lengthened, or shortened in any sequence, and at any time in the process they can be rehearsed and refined.

When the editor goes home at night, he has a console that houses a color television set, a video tape player and recorder, a camera, and a library of video cassettes. Armed with this equipment, he is master of all he surveys. He can pass an evening with an old favorite like Gone With the Wind or with the last half of a New York Giants-Jets encounter. He can record an upcoming program he will miss because of unexpected company; he can aim his camera and make a television cassette recording of the comings and goings of visitors which they in turn can take home and view on their own player-recorder. This technology is not only on hand, but is already on sale at Sears, Roebuck.

If our editor doesn't like the particular video cassette system in his console, he won't have long to wait for a replacement. An announcement has been made of a new video disc system which has a playback unit similar to a standard record player but employs a low-power laser-light source rather than a stylus. The electro optical pickup plays the video recording without touching the record. It provides color video programs up to 45 minutes on a side and is capable of random access, image speed-up, slowdown, stills, reverse, or picture-by-picture display.

Educational institutions and homes are, of course, only two segments of our society touched by the miracles of the communications revolution. The medical field has been a significant beneficiary of our revolution. At Baylor University Medical Center, tiny radio transmitters, developed at NASA to monitor the heart rate of astronauts, are taped to patients to pick up their heart rate and report it to a readout center. In the Midwest, a developer is designing a moderate-income retirement village, where people in the high danger zones of heart disease will sleep under a sensor blanket, which is like any other blanket except that it monitors the vital signs of life.

Technically, I could have voted this morning in the communications center of my home in Barrington, Illinois, instead of having to take the time to go physically to a voting place, stand in line, and await my turn to cast my ballot.

These are a few of the interesting, exciting developments all around us. But let me ask you; Is our society really any better off because the technological and communications revolution is continually updated? That's a fair question which I think we should objectively ask ourselves. We all stood in awe of the worldwide human involvement generated by television coverage of President Nixon's visit to Peking and of an American astronaut's first steps on the surface of the moon. Further, on the positive side, is there anyone who doubts that we're on the way to solving the pollution problems because, through high-speed communications, the world became aware of its extent almost instantaneously? One of the great burdens we carry today is that, through high-speed communications, we've been made aware of so many of society's ills--ills frequently created by other generations which weren't even aware of them. Part of our frustration today is caused by our awareness of these ills and our inability to solve all of them at once.

There is certainly reason to believe communications can be tremendously effective in helping to solve the problems of the urban areas, energy shortages, law enforcement, etc. Surely the organizational experience alone gained from our moon projects was a demonstration of man's ability, through communications, to face and meet challenges of great magnitude.

Here in New York State, you are making a concerted, large-scale effort to recognize and enhance nontraditional education. Education seems to be one of those commodities that creates its own demand. The more education you have, the more you want. More and more people are viewing education not as a prework ritual but rather as a continuing cycle from ages 5 to 80. We face a lifetime of learning and it's precisely this concept to which our communications revolution can contribute so dynamically. We're retiring earlier and living longer. But retirees and employees are discovering that freedom from work is not enough. With increased leisure time, they often find themselves at loose ends. Management, according to Ernest Boyer, the Chancellor of your State University, is finding to its dismay that many workers faced with increased leisure take on fatiguing moonlighting jobs--not out of the need for cash but simply to fill up the time. Mr. Boyer says he's convinced that industry must provide

more varied work schedules and, "in response, education must develop mini-courses, seminars, video lectures, and the like--that can fill the growing block of leisure time."

It's estimated that by 1975, 75 to 80% of the United States work force will be engaged in work that requires knowledge rather than manual skills or labor. This new majority is made up of what Peter Drucker has called the "knowledge workers"--people who require basic education and continuing education to enter the new affluent majority and maintain their place there.

People are "retiring" earlier and earlier, but more and more it is to take up a second or even third career. Like the "knowledge workers," these several-time "retirees" are creating enormous demands for information and education that must be communicated through a variety of media, both in educational institutions and outside them--for most of the 50,000 adults who want further education aren't able to get to a campus.

So far, I've spoken of some of the ways the communications revolution is constructively aiding the changing and dynamic society of which we are a part. Let's admit, however, that there are other effects which aren't so pleasant. Through our advanced methods of communication, we've also made possible better methods of surveillance and manipulation. Louis XIV, history tells us, was an "absolute monarch." He could do pretty much what he pleased with any of the persons or property in his kingdom. His "absolute" power, however, did not extend beyond the persons in immediate contact with him. He had no way of addressing his subjects directly or of manipulating public opinion. By contrast, the powers of a modern president of the United States far exceed those of an "absolute" or "tyrannical" ruler such as Louis XIV. The president of the United States can lift a telephone and within a few minutes find out who any Americans are, who they work for, what they do, how much money they make, how much money they have, how much they owe. The president of the United States can speak directly to anyone in the country and has the technical potential to at least attempt to control public opinion. A modern American president does not exploit all these potential powers because he believes that he ought not to do so and because the nation would not permit him to do so even if he wanted to--but the communications revolution has made it possible to do all these things and many more, as well.

For a long time, it's been assumed that, with more technology and more machines, mankind could only go forward--but there are many in the United States who are becoming increasingly disillusioned with advancing technology and economic progress. They remind us that man has always sown the seeds of destruction together with the seeds of a successful civilization. So far, the destructive seeds have not wiped us out. However, Yonosuke Nagi, Japan's leading expert on America, says that television, the computer, and other communications technologies short-circuit traditional social networks without building new ones, that they heighten conflict more than understanding.

In any event, we laborers in the vineyards of communications should not be offended because there are those who raise questions about how constructively we are using the media of communications. I think we'd have to admit that sometimes we have given in to the temptation to equate the technical developments with progress and to overlook the heart of the matter--the messages that are being communicated. On hearing that Marconi's first signal had been successfully transmitted across the Atlantic, someone asked, "What message was sent?" What is the message today? What are the messages we're sending in our individual areas of responsibilities? That's the heart of the matter.

We've just come through another national election. It is once again vividly demonstrated that the American people have a lot to learn about evaluating political candidates and their selling techniques. Go back to the primaries, to the national conventions, and to the weeks which led to today. How much of what we heard was an effort to play on our emotions--to seek a reaction based on our known biases. How frequently we were bombarded with the inconsequential--with, if you will, "content free" communications. In a country where ideas and ideologies have free access to minds, we must also be about the business of doing the things that would enable those minds to recognize the relative worth of ideas and to make wise decisions. A people conditioned to accept large quantities of shallow communications cannot equip themselves with the mental tools necessary to combat ideas and ideologies that could prove counterproductive and ultimately destructive in our country. Anatole France was right: "If 50 million people say a foolish thing--it's still a foolish thing."

Although elated over the progress of communications technologically, we must direct our efforts more than ever to what is communicated. CATV and video cassettes offer a fantastic opportunity to reach minority audiences of millions of people through narrow-band rather than broad-band communications, but unless we effectively program for narrow-band, the technology will have been for naught. Further, there are basic human judgments and moral imperatives beyond the competence of any technological development. Machines cannot replace seasoned judgments or dilute our responsibility for providing quality content. Had the computer existed at the time, it certainly would have counseled the Greeks to surrender to the Persians at Salamis. Outnumbered three to one, the Greeks were bottled up

between the coast of Attica and the island of Salamis by the heavier Persian vessels. But the lighter Greek ships rowed out from a circular formation and rammed their prows into the clumsy enemy ships, and one by one 200 Persian ships were sunk, captured, or forced to flee, and Western civilization was saved from the assault of Asiatic despotism.

In June 1940, after weighing all the known factors, a computer would doubtless have advised England to seek the best possible terms from Hitler. It would have been tragically wrong, because no computer could ever reckon with or replace the indomitable spirit of Winston Churchill.

The late Norbert Wiener said it -- "The machine's danger is not from the machine but from what man makes of it" -- and we can correctly add, "what he fails to communicate over it." Can there be any doubt that, had the American people and its government really understood Southeast Asia--had been knowledgeable about South Vietnam, North Vietnam, the nature of the government of Diem or of Ho Chi Minh or the history of the Vietnamese people, we would never have become involved in this terrible war? The media were there to inform us, but there was insufficient enlightenment forthcoming.

Among the things that so distress me about public television have been its failure to do more in teaching the people of the United States to evaluate content and its failure to carry more programs that would stimulate a greater appreciation for the quality of life. To have consistently turned down programs on the humanities in prime time because they were considered instructional was tragic. Too frequently, the programs scheduled in prime time simply informed--kept the viewer up-to-date with the contemporary--but didn't educate. As a result of the great success of "The VD Blues," the Public Broadcasting Services is planning a whole series of "message" specials. Good for PBS! In New York City alone, eight telephone lines were kept open all week to accept calls resulting from "The VD Blues" telecast. The station was swamped with 15,000 calls in three days. Half the clinics reported more than a one-third increase in VD patients since the program. The reaction was considered "fantastic" by the station that originated the show. A Chicago station official said that a "part of the success of the program was that it combined good entertainment with a message." Well, I don't know about the entertainment, but I'm sure he's right about the message.

It is our responsibility, and indeed our duty, to heed the cry for a message that goes up every day in this land. We're living in an era which is undergoing a disintegration of the actual authority of the church and the family and of the moral authority of the state. But whether or not we approved of these institutions in the past, they were the rock on which our lives were anchored. It is easy enough to reject them, but how are their values to be replaced? That's the challenge we all face. The challenge is growing bigger and bigger every day--made all the more immense because things are less and less black and white, more and more gray and somewhere in between. So now we have to reverse the longtime trend of thinking firstly of equipment and hardware and only secondly of the messages and content of what's to be carried over the hardware. Seem like an impossible task? It was either Willian the Silent or Charles the Bold--nobody knows which--who said, "It is not necessary to hope in order to undertake, nor to succeed in order to persevere." Our emphasis on content--on the message and how to evaluate it--is the challenge we must undertake with greater energies than ever before. While we can't be sure we'll fully succeed, clearly we must persevere.

A MEDIA WORKSHOP THAT IS BOTH MOTIVATING AND PRACTICAL

by Arnold B. Tversky and Michael Pagan
Dover Public Schools
Dover, New Jersey

For years teachers have been required to participate in activities designed for their professional growth, but not always related to the teaching act itself. Included among these in-service training programs have been formal presentations, workshops, demonstrations, panel discussions, and a variety of others, all planned with too little teacher involvement in deciding what to study and how to approach it. For the most part, these forced sessions have resulted in resentment, leaving teachers with memories of unpleasant and unproductive experiences.

The old AV workshop in the 1960's was at best nothing more than a vendor's representative showing disinterested teachers how to make an overhead transparency or how to thread a 16mm projector. The closest teachers came to a "hands on" approach was to "try it on once for size," never really learning much about production, operation, or the mediation process itself. The whole idea was frightening to many, especially to those who were fairly well set in their ways and who were not about to make any changes in their individual teaching styles.

But times have changed. The charge to the new educational technology is unequivocal -- teachers must be equipped with extensive media resources and with the skills necessary to utilize them effectively.[1] Their role becomes that of a manager of learning and, at times, a producer and designer of learning materials. Keeping this in mind, administrators must work cooperatively with specialists and teachers in developing in-service programs that make sense.

The Dover Plan

Like other media directors, Dover's Mike Pagan was faced with the task of getting many teachers to recognize that students learn from the use of non-print media and that this educational software is now an absolute necessity. The more formidable problem, however, was to develop a workshop program that would be practical and motivating, one that would give staff members a chance to (1) get involved in creating learning approaches, (2) produce their own mediated presentations, and (3) become familiar with the selection and adaptation of available media.

In discussing the in-service program, it was agreed that we would need at least ten two-hour sessions to accomplish our purpose and that these workshops would meet weekly. Principals and supervisors, obviously very close to the classroom scene, were asked for their thoughts relating to the district's needs. They were unanimous in recommending the production of materials that could be used to individualize instruction and to help youngsters who were poorly motivated.

Before getting the series underway, it was decided that building in some added incentive for participants might be a good idea. The Dover Board of Education, after hearing a detailed explanation of the plan, supported the concept by establishing a policy which included (a) tuition-free in-service workshops, (b) two credits towards salary increment upon successful completion of courses, and (3) a materials allowance for staff members. This was indeed a major factor in moving ahead.

The professional staff was notified through a system-wide announcement. This memo included a course description, details regarding time, day and place, and a request for interested teachers to suggest activities for consideration, projects which they might want to pursue. As a result of teacher recommendations, the Media Specialist was given direction. The areas to be covered were filmmaking, slide-tape presentations, use of video and audio tape, dry mounting, photography, transparency production, lettering, and equipment identification and operation.

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1 Gabriel D. Ofiesh, "Instructional Media," in Dwight W. Allen, ed., The Teacher's Handbook (Glenview: Scott, Foresman and Company, 1972), p. 229.

Highlights of the Program

Perhaps the greatest thrill was getting response from individuals representing all levels of instruction from each of Dover's five schools. Although limited to sixteen participants per workshop series, there was interest in what was happening as evidenced by requests to sign up for the next semester after the quota had been reached.

There was a wide variety of projects developed during the initial phase of the program. A high school ESL teacher, taking advantage of media, produced a bi-lingual filmstrip in color for her Spanish speaking pupils. Another staff member, working with his English classes, put together a super-8mm film using "frustration" as a theme. A middle school industrial arts teacher completed a series of multi-color transparencies showing basic techniques in metal working.

Other examples of student interest-provoking activities were a video-tape unit on air pressure and a grade three poetry package using visuals. In addition, cameras began to make their appearance on field trips and in classrooms. It was evident that we were making some progress as many new ways to present materials were added.

One of the outstanding highlights of the concept was the role played by our student technicians. Their media center training and experience enabled them to assist the Media Director in carrying out what seemed to be a "one-to-one" approach in reverse. These teenagers, not only enjoyed this aspect of the program, but also helped to build a better self-image and an awareness of the job opportunities in this field.

Beyond the Production Stage

During the ten-week period, matters relating to selecting, adapting, utilizing, and evaluating equipment and materials were covered. Mr. Pagan placed special emphasis upon techniques that might be employed in the improvement of teacher competency in all areas of instructional media.

As members of School Television Service, Channel 13/WNET, New York, our teachers for the past few years have been able to enrich the curriculum in many different ways; however, without proper utilization techniques, television becomes an ineffective tool. Part of the media workshop time was devoted to reviewing teachers' manuals, planning TV lessons, dealing with scheduling problems, and finding appropriate special events offerings for in-class use.

After materials had been produced, there was follow-up by the Media Director who frequently visited classes of teachers involved in the study. In this manner, our professional staff was able to get feedback relating to their success in driving home a curriculum concept. Also, the student aides shared their memories of effective and ineffective media approaches taken by their teachers in the past.

What About the Future?

We know we are not going to reach every one of our two hundred staff members; however, we have developed some excellent missionaries for proper media utilization. Upon completion of the course, these teachers are fully equipped to assist colleagues in their respective schools with any problems related to communication in the classroom.

In cases where teachers do not elect to become producers, they do become discriminating selectors, being able to identify learning problems and to prescribe practical media remedies. It can be said that teachers working together can accomplish more on a cooperative basis than they would if subjected to imposed programs by principals and supervisors.

The Dover Plan has proved to be a partial answer to the media director's goals for in-servive education. Both the Superintendent and the Dover Board of Education have demonstrated their continued interest by endorsing these kinds of programs. All that was needed was an idea, a little money, and some enthusiastic leadership.

GIVE A TEACHER $2,000

by Geraldine Greenspan
Jefferson School
Norwalk, Connecticut

This presentation outlined the method by which a fifth grade teacher in Norwalk, Connecticut, utilized a $2,000 mini-grant to organize a program in social studies. The goals of the program were to increase interest in reading both in social studies and in related areas, and to individualize instruction through the use of audiovisual materials to allow students of varying abilities to achieve greater success.

Those attending this presentation received a dittoed outline describing the Jefferson School District, the make-up of the group participating in the program, a list of the materials ordered, and a summary of a typical unit.

After an introduction by Mr. Fred A. Urban, principal of Jefferson School, who described the mini-grant, what it is, and how it was awarded, Mrs. Greenspan said a few words about the organization of the units and the generally gratifying results achieved because of the availability of more varied media.

Following this, a tape-slide program was shown which demonstrated the procedures applied in choosing the materials, the organization of the materials; and the use of the new books, filmstrips, tapes, records, film loops, and transparencies by the students involved. At the end of the program, Mrs. Greenspan answered questions concerning her evaluation of the success of the program, and the reasons for the increased enthusiasm on the part of the students and the staff members.

PROGRAMMED INSTRUCTION:
Key to Individualized Learning

by John E. Keshishoglou, Ph.D.
Professor and Director
Division of Communications
Ithaca College, Ithaca, N. Y.

In this presentation programmed instruction was defined, research findings analyzed, and methods of constructing an instructional program were examined.

The presentation began by discussing the historical, but little known, role of programmed learning and the recent revival of interest in this method of instruction. The characteristics of programmed instruction such as small step progression, active participation by learner, immediate feedback and reinforcement, adaption to individual rates of learning, adaption to individual ways of learning, and constant evaluation were discussed. Programs written and used at the Instructional Resources Center of Ithaca College were used to illustrate these characteristics (these programs are part of film production and photography courses at the college and cover topics such as lenses, photographic filters, and projection screens).

The current state of programmed instruction was assessed, and developments in "hardware" were described and compared as were developments in "software." Research findings and conclusions were discussed in detail. This research was divided into four broad categories:

A. Research dealing with presentation variables
(Size of step, pacing, branching, etc.)

B. Research dealing with response modes
(Multiple choice vs. constructed response,
overt vs. covert response, etc.)

C. Research comparing programmed instruction with other methods of instruction,
with emphasis on the problems encountered whem comparing programmed instruction
with what is commonly referred to as "the traditional method of instruction"

D. Research dealing with other aspects of programmed instruction

The presentation also discussed in detail findings from a three-year research study in learning conducted by the speaker. This study examined the presentation variables of programmed instruction and attempted to define the effectiveness of visuals when they accompany a programmed written test. Conclusions of this study were reported. The speaker emphasized the fact that this study supports the thesis that written tests alone cannot accurately measure the precise contribution of visuals to learning.

After summarizing briefly general conclusions resulting from the research, the speaker discussed requirements and procedures involved in writing an instructional program - from selection of a topic and definition of objectives, to final revisions and evaluation.

CHANGING TEACHER'S BEHAVIORAL ATTITUDES THROUGH TELEVISION

by Ronald M. Braz
Freeport, New York

Probably there are two statements that I can make that we will all agree to be true. The first is that there is a tremendous need for teacher training as well as the re-training of existing staff to keep them abreast of new techniques as well as adjusting to the changing types of students we are coming across daily. The second statement is that technology, especially television, is playing a tremendous role in the educational scene. With these two statements, I should like to explore some of the problems of teacher education and re-education and some of the ways that have been explored and have been found successful in the Freeport School District.

In the areas of reading and math, especially on the elementary level, it is fair to say that little or no preparation for the teaching of these subjects is given to students in many of our colleges, unless the student happens to have a minor in one of these areas. This poses an obvious problem for our educational system. True, the average teacher is competent in math and reading on the elementary level. What teacher do we know of who can't read at least on the grade level she is supposed to be teaching and do the mathematics? This isn't good enough! Teaching is the ability to transmit your knowledge to someone else. Knowing it does not mean that the student will, through some system of osmosis, acquire this knowledge.

If a teacher on the job has not had sufficient training, then the school district has a responsibility. It has hired a person, at considerable expense to the taxpayers, to teach the young. It then must pour additional funds into the in-service teaching and training of this person to make him capable of doing the job required.

How do we allow our teaching staff to truly see and become aware of good teaching techniques? Of course, any teacher is welcome to visit another teacher's classroom and see a good lesson, but who is going to take care of her class while she is doing this. Well, what about the teacher who is observed? She may be good, but she may very well be shy and not want visitors, as many teachers are. Then, of course, if in any school district, on an elementary level, you had 100 or 200 or more teachers, you can imagine the administrative paper work and problems involved in arranging for all these people to be involved in inter-visitations. Then, who is to say what they will learn.

We in the Freeport School District have been using the tool of television to teach teachers how to teach. We all know that television is a teaching tool. Just think about your own children, or people you know. They all know what toothpaste makes your mouth kissing bright. We have all seen, to some dismay of educators, the tremendous teaching being done by the Children's Television Workshop, through Sesame Street and the Electric Company.

Our Reading and Math Departments, which are coordinated on a district level by district directors, realizing that there was a deep problem in teacher training, have developed, through our Office of Media Resources, programs for teacher training. For two years, video tape programs, covering specific reading techniques, were produced in the various schools, using students right out of classrooms. These tapes were edited to control the time length, realizing that the end product was a teaching tape for teachers and that the necessary length of the tape was just sufficient to get the point across. Tapes on initial consonants, inferences, beginning vowel sounds, etc. were produced along with work sheets and programmed for teacher reaction. Through grade level conferences, in-service workshops, etc. these programs are being used to point out specific areas that need changing or improvement. Here, one teacher is demonstrating for a large number of teachers, solving the problem of inter-visitations. Seeing the success of this program, the math director is designing a whole series of programs to acquaint teachers with specific math techniques to be used on the elementary level.

There is yet another side effect to this type of program. A medium like television allows people to see themselves and we begin to break down some of the barriers that have kept teachers in their own private world. The doors are still on the classrooms and, when they are closed, who knows what is going on inside. Many teachers are just now beginning to open those doors to allow others to see the good job they are doing. By going into a classroom, by praising the

teacher, and by taping samples of his lessons for others to see, we are rewarding him with a pat on the back and, at the same time, showing others what their colleagues are doing. Of course, through careful handling of this technique, we have avoided jealousies or fears. It only takes two or three people in a building to be willing to be open to create the feeling and desire for others to move in this direction.

Two years ago in one of our elementary schools, we began allowing teachers to video tape their own lessons. No supervisor was there and they were the only ones to see the tape. Some invited the principal and other curriculum people in because they were not afraid of what they had done and grew from this type of self-analysis. We hope that the future for supervision will move to the use of television. If a televised lesson, shared with the supervisor, is meant for improvement purposes only and not evaluation, then there is a chance for increased teacher growth as our professionals see themselves, their good points and their weak points, and grow continuously. Truly, we have a job--a job to train and re-train ourselves and our colleagues. The media has an important role in this process. The curriculum people, alongside of the media specialists, can produce viable programs that will have tremendous impact on our teaching in the future.

INSTRUCTIONAL DEVELOPMENT AND INNOVATION

by Albert E. Beilby
Syracuse University

"The overriding goal and purpose of the field of educational technology is to facilitate and improve the quality of human learning." (Ely, et al, 1972)

The above statement is a quotation from "The Field of Educational Technology: a statement of definition," appearing in the October '72 issue of Audiovisual Instruction. The article, a culmination of the efforts of leading educational technologists under the leadership of Donald P. Ely, promises to be a landmark for our field.

I chose to open my presentation with that statement because I want to make it clear that a number of professionals believe that our overriding goal is to facilitate and improve the quality of human learning. As so often is the case, we tend to lose sight of this larger goal occasionally as we pursue enabling goals such as providing service to teachers and administering resources.

Improving the quality of human learning is a difficult task at best. Many approaches are offered, but no one can say with certainty which one works. Some will say the use of television or a combination of audiovisual media is the best way of improving the quality of learning. Others will cite individualized instruction, or flexible scheduling, or voucher plans, or open classrooms, or...but the list could go on and on. Let me make a major assumption at this point: the "single" best method of improving the quality of human learning is through the use of instructional development (ID). I hope many of you will agree with the assumption. It excludes none of the means previously cited nor does it exclude any approach to improving the quality of human learning that I can imagine (unless it's a non-systematic, haphazard approach which, I suppose, some might argue is the best).

There are many "definitions" and approaches to the ID process. Yet, when you "sugar it off," as our Vermont friends would say, you can define the ID process rather simply (although we should remain cautious of oversimplification). Let me define ID as follows: 1) It is the application of the system's approach to the recognition and solution of an instructional-learning problem; 2) It is primarily an attempt to individualize and personalize learning; 3) It is the consideration of a vast array of resources and the selection of the one(s) best suited to the learning process; 4) It is evaluation of the products and processes that emerge.

I will not attempt to define ID any further than this. You may say it is an incomplete definition, but I invite you to add your own permutations.

There can be no doubt that our field is vitally concerned with the ID process. We have seen one of our major journals, Audiovisual Instruction, devote two full issues to ID in 10 months time. We have also witnessed the recent formation of the Division of Instructional Development within AECT. Such trends indicate we are fast adopting the ID process as an integral part of our field. I question the wisdom of that adoption, and today I want to caution us against it.

I expect that in this room we have a wide range of talent and expertise in the ID process. Some of you may not see yourselves as instructional developers. Some of you may desire to be instructional developers and have perhaps already made some initial attempts at ID, and some of you are truly expert in the ID process. Regardless of your expertise, it is your interest in ID that concerns me.

Let me now reveal an outline for this paper. It is an advocacy paper. I have already stated my contention that our overriding goal is to improve the quality of human learning. I have also stated my contention that ID is the best means of attaining that goal. The balance of this paper will deal with, first, the prediction that we will--and perhaps already do--look on the ID process as our private domain; second, I will hypothesize that we, as educational technologists, cannot

reasonably do justice to all the work that must be done in ID; third, I will present my major proposition that in order to improve the quality of human learning, we must actively seek to divest ourselves of the major role in ID and encourage classroom teachers to adopt the process as a major part of their repetoire; fourth, I will offer some ways by which this task might be accomplished; and, finally, I will discuss how such action might affect the role of the educational technologist.

Let us deal first with my prediction that if our field continues to act in the near future as it has in the recent past, we will embrace--if we have not already done so--the ID process as part of our heritage and exclusive domain. Why should that be a problem? Let me describe an incident from our recent past; a phase in our short history perhaps familiar to most of us.

Sometime in the mid-sixties, some librarians and some media support personnel began to get a little "edgy" in each other's company. Nervousness and suspicion grew on both sides until it reached some hysterical high about 1970 with the publication of a pamphlet called "Crisis in Instructional Technology" (Timpano, 1970). In this pamphlet, some of "our people" attacked some of "theirs" for infringing on "our" territory. Sure enough there was a crisis, but an unnecessary one, precipitated perhaps by librarians unsure of what they were seeking, but blown all out of proportion by instructional technologists who succumbed to what Robert Ardrey (1966) describes as the "territorial imperative." Some echoes of this battle are still with us, as witnessed in an article (Eshleman, 1972) appearing in the June 1972 issue of Educational Technology. This article implies that librarians and educational technologists are of such disparate types that they cannot and -- perish the thought -- should not even begin to think that there might be some duplication of effort. The Eshleman and Timpano publications are just two examples of educational technologists protecting their "turf."

Protection of territory or domain is not particularly bad. After all, the physicians and attorneys have been doing it successfully for many years. However, it has been demonstrated (Elliott, 1971) that some of the logistical tasks of the support and supply functions, as described in Jobs in Instructional Media (Hyer, et al, 1970), should more appropriately fall within the domain of the librarians. Most educational technologists I have encountered appear to agree. At some leading institutions educational technologists are training librarians in basic media skills (e.g., Auburn University and Arizona State University). In short, no defensible rationale existed for "protecting" our domain from librarians. Yet it happened. It could happen again, only this time the "prize" might be ID and the antagonist could be the classroom teacher. Such a confrontation could have serious effects on our field and on the quality of human learning.

I contend that serious concern about improving the quality of human learning demands that we do all we can to encourage classroom teachers to assume the major portion of the ID task. My rationale for such a statement is simply this: We have in this country some 45,000,000 students and more than 2,000,000 teachers in elementary and secondary schools (NEA statistics). The task of applying ID to all instruction and learning is simply too vast to be accomplished by any army of instructional developers we could realistically expect to produce.

The problem is essentially one of economics and time. School systems cannot afford to hire all the specialists required to successfully apply the ID process to all learning situations. We don't know what an ideal ratio of faculty to instructional developers is, but I think we could agree that it should be considerably better than currently exists. Saying that, we're talking about a great deal more money than school systems are able to supply.

Now, I don't doubt for a minute that it might indeed be possible for our special interest groups (ID specialists) to exert propaganda and pressure to enact special legislation or to form public attitudes that would force such monies to become available. However, I'm categorically opposed to such efforts. Such proposals call to mind those astute firemen from steam powered locomotives who, noticing the absence of shovels in diesel engines, gave birth to featherbedding. It also calls to mind the practices of the American Medical Association in restricting the numbers of men who could enter the medical profession, thus precipitating a national health crisis. Any such action -- even though "everyone does it," and they are "political realities" -- indicates a lack of professional integrity and a lack of concern for improving the quality of human learning. Such acts would irreversibly increase the cost of education. So, although schools might afford a group of ID specialists through some alteration in the present scheme of things, I denounce that approach and will continue to do so until someone can prove to me that it is demonstrably superior.

Now, if schools can't afford to hire an adequate number of ID specialists, we have -- as I see it -- only two remaining possibilities for improving the quality of human learning through the application of the ID process. First, school systems can continue functioning with their one or two or three or four full-time, professional instructional developers. In that situation the educational system is faced with a problem of time. For the limited number of instructional developers to service all learning situations at an institution would require a number of years. In addition, courses could require continuous revision adding to the workload and time required to service an institution's curriculum. The logistical problem is overwhelming. Of course, there is the possibility that there will be many courses on the market that will have been developed through the ID process. Perhaps teachers can simply select the best of these programs. There are several problems with the concept; first, "one man's meat is another man's poison," that is, some teachers don't agree with, or want, what others produce. Second, who will act as an information clearing house on what's available and who will rate it critically? Third, how can schools afford the wide variety of packaged programs when they find it difficult to afford textbooks and supplies? Fourth, recognizing that textbooks have been marketed all these years, that there have been "bummers" and that the average life of a textbook may be five to ten years, can we expect anything different resulting from substituting, for textbooks, materials developed by the ID process? Fifth, will teachers buy those weird, complicated-looking packages that sometimes result from ID? Wouldn't they rather use something they're comfortable with...something like a textbook?

Marketing of materials produced through ID has not yet proven wholly admirable nor successful, and I entertain little hope of its imminent success.

Let's re-examine my case thus far. I have claimed that maintaining the current ratio of instructional developers to faculty will result in insufficient and inefficient ID. I have also claimed that increasing the ID staff to a sufficient number (admittedly unknown) would be prohibitively expensive. It appears, therefore, that a third alternative for utilizing ID to improve the quality of human learning is necessary. I believe that the third alternative would have at its core, the precept that existing staff within the educational institution must adopt the ID process. In effect, I'm saying that classroom teachers must evolve into instructional developers. This may imply that people who are now instructional developers will evolve into something else. I'll return to that one at the end of the paper.

As I see it, there are essentially three ways in which the classroom teacher might acquire the ID process. One way would be for teachers to work with an instructional developer improving the courses they teach. Another way a teacher might acquire ID skills is through in-service training. Finally, teacher preparation programs could contain ID philosophy and skills in the pre-service curriculum.

Expecting teachers to pick up ID skills by way of the first approach, by observing and working with instructional developers, presents two problems. One is that such an approach to the problem could only affect a small number of the 2,000,000 teachers in our public school system. The second problem is that teachers who engage in such an approach could rarely exploit the instructional developer's full talents. It's unlikely that these teachers could adopt a philosophy or process of ID with such a limited exposure.

The second approach by which teachers might acquire the ID process -- via in-service programs -- has been used with mixed results. It is certainly a more deliberate attempt to foster ID skills and merits our careful attention.

The concept of in-service training is a good one. I suspect that some of you have conducted in-service workshops for teachers. The in-service approach lends itself to certain concepts and activities. However, as currently structured and perceived, in-service programs do not constitute an adequate vehicle for training teachers in the instructional development process. One apparent reason is that in-service programs typically lack the inherent structure that allows for mastery of objectives which require more than superficial awareness. Louis J. Rubin (1971), Dean of Nova University, tells us that practitioners in education, as in any other endeavor, must engage in repeated practice of the skills they wish to acquire. Typical in-service programs do not allow for such practice. Robert N. Bush (1971) of Stanford University also accuses in-service programs of lacking rigor and of being frequently irrelevant to teachers' needs. He goes on to say that sufficient time to engage in a program, and an opportunity to use (practice) the training are two elements frequently lacking in in-service programs.

There are other problems with in-service training programs. While they are ideally designed to provide opportunities for teachers to increase their teaching skills, in-service programs are often used as a method for arbitrating advancement on the salary schedule. They are also a route out of the classroom, often promoting to some other capacity the teachers they are purporting to help. And further, they are temporary rescue missions for overcoming pressing crisis situations (Edward J. Meade, Jr., 1971). It would appear, then, that with these shortcomings, in-service programs are unsuitable for training teachers in the ID process. However, each of the writers just cited suggests that the concept of in-service training could be restructured (Rubin, 1971; Bush, 1971; and Meade, 1971). Such restructuring might make in-service programs suitable for training teachers in the ID process.

We, in fact, have an example of a restructured in-service program in the Instructional Development Institutes (IDI's). The IDI's which have been funded by OE to the tune of approximately $800,000 this fiscal period, seem to be a bright spot in the ID and in-service pictures. The IDI's do not fit everyone's concept of an in-service program. Teachers are granted release time, and they receive instruction intended to increase skills. Beyond that, there are some discrepancies between what is typically perceived as an in-service program and the IDI concept of an in-service program. Most of us view in-service programs as a one evening/weekend session, or as several evening/weekend sessions spread out over a week or a month or a school year. An IDI, on the other hand, is an intensive week-long, 8 hour-a-day experience. Also, while in-service programs are typically viewed as being solely for the teachers, the IDI plan calls for involvement of the school administrators as well. Some people who work with the IDI program prefer to think of it, not as an in-service program, but as a form of continuing education. This may be an euphemistic attempt to avoid past associations. Regardless of its label, an IDI provides participants with initial skills and competencies for applying instructional systems principles and the concept of individualized instruction to the teaching process. The success of the IDI varies depending on whom you talk to. It is my impression that the IDI is at least a qualified success. It does train teachers and administrators of a school system in the ID process. How well these people are able to apply these skills when they return to their own school, and how well they are able to influence other teachers, is something which has not yet been determined. However, at this early date, there are indicators that the IDI may work well as an in-service approach to training teachers in the ID process.

Thus far, we have considered two possible ways that teachers might acquire ID skills: from observing an instructional developer at work -- a generally unsatisfactory method, and through in-service programs -- a sometimes satisfactory method. I would encourage the use of validated in-service training courses, such as the IDI, as one approach to providing ID skills and concepts to teachers. However, in-service training programs -- as important as they are -- are essentailly a band-aid approach to the problem. Dwight Allen and Robert Mackin, respectively Dean and Assistant Dean of the School of Education at the University of Massachusetts, point out (Allen and Mackin, 1970) the area of preservice staff preparation, or teacher prep, as the area where perhaps the greatest single impact can be made. They suggest that efforts for change must extend beyond the schools and into the arenas of teacher education. The third approach to providing ID skills/concepts to teachers, then, is to make the ID process a major part of the prospective teachers' curriculum. It is on that approach that I would place most of my marbles. Pre-service teacher education has long been criticized, and the relevancy of current methods courses have been questioned (Allen and Mackin, 1970). Training in the ID process could be conveniently substituted for the deadwood in the current pre-service programs.

Currently, there is no commitment on the part of any teacher training institution to train their teachers in the ID process. There are a number of institutions that provide training in some skills related to ID. Washington State University trains students in writing objectives and in the use of media and the systems approach; the University of Iowa does, too. So do a number of other colleges and universities. But there is no concerted effort being made to train teachers in the use of the ID process. And teachers are ready! The New York Congress of Teachers (formerly NYSTA) and the California Teachers Association have encouraged teachers to participate in IDI's and have even conducted them. Teachers are negotiating for softer issues; salary demands are going to become less prominent. Teachers are demanding more autonomy, more respect and authority, and are looking for ways of demonstrating their competency and importance. Demands for time to develop curriculum materials are becoming more common, and I suspect that demands for skills in ID will arise in the near future.

Having looked at ways that teachers might acquire skills in the ID process, it seems that the most effective approach would be to install the ID process in curricular programs for teachers.

Since this approach will satisfy only those new teachers emerging from colleges and universities, it should be accompanied by quality in-service programs such as the IDI. A single thrust would be less satisfactory. An in-service thrust alone would be always a little bit behind, and the program would be continuously playing "catch up." On the other hand, a thrust designed only at changing pre-service curriculum would not provide for collegial support in the home school. This is an important consideration.

But why do I tell people in educational technology all of this? So you'll have time to run out and change jobs? Nothing quite so dramatic. The change I've suggested can take place without our cooperation, but it would be a slower, more difficult change with, perhaps, detrimental side effects. I hope that what I present here today will not result in hardened attitudes about "protecting" ID functions for our field, but, rather, I hope to inspire an approach tendency toward helping teachers become Instructional Developers.

Those of you entering into, or practicing ID needn't fear for your job. I believe the change from ID performed by educational technologists to ID performed by classroom teachers is unlikely to occur within the next 25 years. It's a big world, there are lots of traditional thinkers and many pockets of resistance. Something greater than 25 years is a more realistic time frame. Through the period of transition, the educational technologist as instructional developer will be a critical figure in education. He will be needed to train teachers and to develop instruction. Beyond that period of transition, there will still be a need for the instructional development specialist, that is, the educational technologist as instructional developer. The instructional development specialist will be necessary to train teachers in the process. He will be needed to explore ID approaches and theory, or do research, and to test new methods in ID. Instructional development specialists will also be needed as central figures in some form of support service to teachers. I believe each institution or school district or geographic region will need support services in ID; perhaps in the form of some central agency to which teachers can bring their sticky problems. The major role for such an agency of skilled instructional development specialists would be to act as a quality control point; an uninvolved party to play Devil's advocate and to keep instruction "honest," rigorous, and meaningful; in short, he will be needed as an evaluator. I see the future role of the educational technologist-instructional developer as a challenging and rewarding one. He will need to sharpen his skill, and act as facilitator for the new breed of instructional developers who will evolve from the teaching profession.

Why am I telling you this? To develop an approach tendency toward such a future, yes. And more. There's a political issue that must be faced. I believe that there will be people in our profession who will sound alarms at the thought of a "takeover" of the ID functions by teachers. There will be teachers who will pale at the thought of being "pushed out" of the schools by instructional developers. Eventually, larger organizations must get involved. Professional organizations, teacher credentialing agencies, state education departments, and others. Competency based standards for teachers will need revision. Many as yet unseen forces may come into play. For these reasons, this organization - NYSECA - and AECT, particularly the Division for Instructional Development, should consider the proposal I have made -- that teachers should become skilled in the ID process -- and endorse it as a goal.

I like to think that my remarks today are reflections on evolution. On the evolution of the classroom teacher to teacher-instructional developer and on the evolution of our field. Evolution is an inevitable process. We must consider how to face it and how to use it. We must keep in mind that as we evolve, we must choose whether to have as our overriding goal and purpose to facilitate and improve the quality of human learning, or whether it is more important to protect the role of instructional developer from encroachment by the classroom teacher.

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CABLE TELEVISION: ITS POTENTIAL FOR EDUCATIONAL USE

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In order to discuss Cable Television potentials for use in the instructional/educational/cultural learning construct, it may be helpful at the outset if we take a new look at learning needs and the ways in which various technologies might be used to approach those needs. Cable television, although only one of the many technologies that can be attentive and responsive to those needs, is seen as only one of the many related technologies necessary to the total concept of 'delivery systems' for creating more learning opportunity for the learner -- whatever his age, and wherever he may be located, physically.

The major interests of the State Education Department in the use of technology for instructional systems are best embodied in the following four major concerns:

1. There must be an identification of appropriate technology to meet individual needs and interests of all learners of whatever age or circumstance;

2. Technology must be used to produce a more economical system of instruction for as many persons as possible regardless of the limitations of cultural disenfranchisement;

3. Technology must be used to make the entire system of instructional opportunity both enlarged and cost effective; and,

4. Most important, technology and cable must be used to provide more abundant job training and occupational retraining for adult populations in the home, at work, and in school.

One undergirding commitment of the State Education Department is that the creation and use of all technology materials for instructional and cultural needs must proceed from the basis of understanding and a clear concept of the goals for which such instructional materials will be created, an in-depth pre-test of those goals and needs, and of the needs of the group for which those materials are designed, and, last, a post-test of the materials and learning output to insure that the following three major premises have been achieved:

1) that learning has taken place;

2) that the learning was needed by the individual for an identified goal or objective; and,

3) that the process of presenting the material has resulted in effective knowledge gain, retention and cost effectiveness.

It is the position of the Commissioner of Education that an inquiry into the use of cable must result in service to the needs of the citizens of the State of New York.

We all know what the evaluation of statistical evidence can do to every situation of concern and endeavor -- particularly to an evaluation of directions to be pursued and managed for education at all levels, including those of post-secondary need in the United States.

Currently, there are more than 8 million students in post-secondary institutions in the United States. Let us bear in mind that this figure does not include the multiplicity of those who are engaged in some programs known as the 'university without walls,' programs that are direct spin-offs of the effort of the open university of Britain, and the even more interesting and fruitful efforts of such programs as that of New York State -- namely, the external degree. You may recall, that the Commissioner of Education, Ewald B. Nyquist, at his inauguration in September 1970, announced his concept of the 'external degree'. For the first time in higher education history, an individual would have the opportunity to receive a degree by never having to set foot in a classroom, if he so chose. Or, he might combine a learning and living experience with some institutional work, or with library work, or with any combination of effective information

and learning gathering techniques he might choose. All that would be required was to demonstrate on examination that competence had been achieved. The first group of 77 such persons achieved the degree this year in a ceremony conducted by the Regents and the Commissioner of Education of the State of New York. The candidates included a broad spectrum of ages -- from the early twenties to the early sixties, from members of the armed forces to retirees. More than fourteen states were represented among the recipients, for the external degree knows no boundaries; and at the next awarding of degrees it seems almost certain that there will be recipients from foreign countries, as well.

Given the potential that the learner will and does receive learning opportunity and information from a variety of non-traditional, non-classroom sources, we must regard a recent statistic with some concern. We now have more than 1,100 community colleges in the United States. As I stand here, this statistic is already outmoded because a new community college opens every week. We must seriously ask ourselves, "Why are we building more soon-to-be-outmoded structures for a traditional approach to learning and teaching which may soon demonstrate that other structures exist for meaningful living and learning and earning a living?" Obviously, we have become victimized by what has developed and evolved in our complex and over-protected structure of traditional, four-square learning patterns. Already, the open admissions approach to those who were formerly deprived of learning opportunity at the post-secondary level has demonstrated that a large segment of our population has truly been intellectually disenfranchised.

Education and the educational community has a long history of ignoring opportunities presented to it for more broadly disseminating learning opportunities. Our educational colleagues have an equally long track record for having decided to abandon technology after technology which spelled continuing progress in advanced informational, cultural and in-depth knowledge-sharing possibilities. We initially fought for, and then denied, the possibilities of the use of radio, both FM and AM. Only a relative handful of such broadcast-use opportunities are in existence, today. Not many of them are used to better the needs of the learner -- the homebound, the adult, the handicapped, the isolate on the farm or in the Appalachian region.

When the age of television burst upon the communications' scene, we were frantic to be sure that adequate open-circuit channels would be available for the many learning and teaching opportunities we were able to forecast. The attempts were spotty. The conversion of open circuit channels to a number of routinely uninteresting and frequently esoteric presentations, which research tells us are most often observed by those who have rare need of it, is now well known. The fact that the management of such open circuit ETV or public broadcasting channels must continually seek additional funds for a fiscal-starvation type operation is not at all encouraging. The educational community and the sometimes forward-looking members of that community have gone on to new enthusiasms as new technologies have emerged. The researchers and the manufacturers of the hardware seem to outstrip the best of our well-intentioned effort to create acceptable means of producing the software or courseware, for the 'pearls' of learning technology that are continuously cast before us.

Now we stand at the threshold of one of the most pervasive and exciting of all dissemination system possibilities to date. The initial provisions for education to access the use of that technology have been made available to us. Education has had to struggle least for this opportunity, and yet we find surprisingly little preparatory effort being put into the consideration of cable system use for learning opportunity.

Although I will specifically address the ways in which these opportunities may be seized at the post-secondary level, the same principles may apply to all areas of teaching and learning -- elementary, secondary, and higher institutional, -- private, public, and parochial.

Several points of general information must be noted at the outset: The Federal Communications Commission has promulgated certain Rules and Regulations which shall apply to cable television operations for an interim or experimental period of the next five years. In New York State, we have exercised some forethought and regulatory effort at the State level. In January 1973, a Cable Television Commission will come into function. This has been provided by law which was two years in the making and which was promulgated on the basis of testimony which was organized and held under the aegis of the legislative Standing Committee on Corporations, Authorities and Commissions.

One of the significant and educationally important provisions of the FCC Rules and Regulations is that all future systems must provide for three public access channels. What this means is simply that each cable system which comes into existence, as of this year, must provide an initial

minimum of 20 channels to the community it serves. Of those 20 channels, three must be dedicated to public use -- one for local governmental use, one for community use and one for educational use. It is this latter channel that provides a definitive way for organizing the educational interests of a community or a region, depending upon the coverage or intended coverage of the cable system.

In the State of New York, we have the advantage of several groups of institutions of higher learning being located in regional settings. As an example, one such group is located in Rochester and its vicinity. Another is located here in the capital district. Still another is located in the Buffalo area. These are only examples of some possible locations. Again, for example, in all three areas I have named, franchises for cable system operations have been awarded or are about to be awarded.

One possible configuration of use of the public access channel for education is a coalition or mutual planning activity by the post-secondary institutions of an area. Such coalitions, representing an organized approach to the indicated cable system operator, would have the following positive benefits to achieve:

1. An organized approach to the use of a channel for reaching the homebound, the aged, and the handicapped with organized learning material of significant benefit and use. (Parenthetically, it should be borne in mind that all cable systems have the technical capacity to provide two-way audio channels, also. Thus, opportunity is assured for asking questions or seeking additional information by the learner from the disseminating source.)

2. Organized consortia, which present a single advisory voice to a channel operator, might also plan joint offerings for inter-institutional recognition or credit, as did a consortia of four institutions in Rochester, this last summer, by use of an Instructional Television Fixed Service interconnection.

3. An organized coalition of advisory persons might logically include the secondary level institutions of its areas and/or the BOCES board operation. This could be done to serve several needs, such as: a) to more closely integrate the preparation of students for a post-secondary experience; b) to provide a vertical kind of articulation in such planned secondary and post-secondary need areas as understandings to prevent drug abuse, coordinated programs in the area of venereal disease, the upgrading of reading literacy, and the dissemination of logical information in the areas of personal and environmental health, and for a coordinated effort in vocational rehabilitation, upgraded training for the employable and career guidance for those who, through lack of such guidance are professionally competent, but may have become work-disenfranchised.

Recent efforts by the advisory groups to the Federal Communications Commission on possible developing problems related to cable systems, have made several interesting suggestions which help to guarantee to education some additional channels for learning use at the local level. Included in these suggestions has been the one that recommended the following: Where the three public access channels are not in continuous and planned use for their designated needs -- that is, for local government and general community use -- why not make such channels additionally available to the educational community for additional educational opportunity use? Thus, if more than one channel is needed at a given time, and one of the other public channels is not requested or scheduled for use at such time, why not use it for additional learning and cultural opportunity to the community? Local libraries, museums and performing groups with integrated plans for re-enforcing learning in specific content areas, or at specific learning levels, could thus bring reenforced and additional learning advantages to the entire community.

One additional positive educational need can also be achieved by consortia which form advisory committees or groups to the channel operators. Coordinated effort in learning-opportunity-planning can achieve the following: mutual planning for similar learning needs can take place between institutions, school systems and even between regional consortia across state lines, if desired.

On November 20, 1970, the Regents promulgated a position paper on cable television for the State of New York with particular emphasis on educational and public service need. In it they said the following:

> The Regents are concerned that every positive action must be taken on behalf of the immediate and long-range interests of the people of this State in relationship to the emerging communications technology. The Regents are particularly concerned that all local governing bodies shall be informed about the following matters related to cable television practices:

The statement then goes on to indicate two major concerns: First, that all members of every community should be given an opportunity to express their views about any given CATV franchise. No grants should be made before this takes place. By the same token, all members of a community should and must be alert to franchising procedures and proposals. Educators must express their views as to what is desired of a franchisee and what must be done to serve the all-over educational needs of a community. Second, the Regents have made themselves available to provide information, advice and guidance to franchise seekers and to communities on how to best formulate franchises to meet the needs for educational and informational opportunity. Most important, the last statement in the Regents position on cable television says the following:

> . . . the Regents are convinced that the full potential of long range developments in the field of communications technology are only just beginning to manifest their more exciting possibilities. With this in mind, the Regents strongly recommend that local governing bodies be zealous in retaining for all of their citizens complete options to flexible future developments of cable television.

Much of what still needs to be examined by us in this session will depend upon how fully certain of the provisions of the FCC are understood and exercised, first, by franchise granting authorities; and, second, how quickly both the public interest and educational groups of a community make their desires, outlooks, and identified needs known to the cable operators.

For example, one of the things which the educational community must recognize is that there is a provision in the rules and regulations of the Federal Communications Commission for the importation of Public Broadcasting or ETV Stations' signals. No community of the State need be without such a signal. In some instances, such signals do bring to a community the planned instructional and informational offerings of a distant or nearby community with which it may not normally exchange ideas, information or opportunity. Nothing need prevent the organization of activities which may access, develop and distribute such opportunity. Joint effort of communities makes possible extended and varied planned opportunities for adults -- a frequently neglected segment of our community concerns for the adult and senior citizen -- needs that frequently go unsatisfied. Budgets for such activities are notoriously slight in most communities, but a pooling of limited resources and the interconnected uses of CATV systems can frequently broaden such opportunities. When these are coupled with extension opportunities offered by open circuit broadcasting, vastly improved and enlarged programs can and may result. Such extension and continuing education opportunities can be especially useful in rural areas where such programs have been curtailed or almost eliminated.

One of the major provisions in the Federal Rules and Regulations pertaining to cable television is that of program origination facilities. As the rules are now written, the cable system operator is required to have sufficient equipment to originate or provide for the origination of programming to a "considerable extent." Precisely how this is to be defined is not yet clear. What is clear is that such programming is to be provided over channels designated for this purpose. However, nothing in the present rules and regulations require the cable system operator to provide such equipment or facilities, or the appropriate operating personnel, at no expense to education. Only the provision of the channel is required. It can be argued that if educational interests were to provide pre-recorded material in either video or audio form, the operator of the channel must provide the facilities to air these. It would be well for educators to be alert to the needs of dissemination of material and make their voices felt to the franchising authority before, not after, the franchise is granted. Thus, there would be assurance that both originating equipment and pre-recorded material playback equipment would be available. Most important, it should be remembered that cable systems with less than 3500 subscribers are NOT required to originate programming of any kind for its subscribers. Thus, matters and events of a strictly local nature would have no means for expression in the community being served. Such a provision for a less than 3500 subscriber community might, however, be a part of the requirements of the franchising authority. Certainly, an educational advisory group and a group advising on community needs should be alert to the desirability of such a provision. The educational community might well pool its resources with the franchise operator to make sure that such a cable-system-broadcast-possibility comes into being. The community might require that a community owned studio and facilities be provided by the community, with the regulation of such facility to be entirely controlled by the community. Or a joint operational agreement between the community and the franchisee might be part of the franchise granting agreement.

Still another possibility is complete control and operation by the educational community, with joint responsibility for the studio operation to exist between the educational community and the operator of the system. In this way, the operator could schedule the studio use for

leased channel operations, and for local commercial recordings when such studio was not in use for the public access channels. Charges for such a facility might be a matter of special corporate arrangement with profits-after-operating-expenses contributing to defraying the cost of educational/cultural programming for the community.

This concludes my prepared remarks. Discussion can lead to further examination of interesting possibilities and responsibilities. Let us agree that the Regents have provided us with the incentive and insights in their position paper on cable television when they said:

> "Communications technology is on the verge of a revolution so vast and so profound as to influence in an unprecedented way all aspects of man's existence.
>
> "The pending metamorphosis of Community Antenna Television (CATV) into copious systems of multi-channel cable television; the ensuing evolution of cable television into elaborate two-way communications systems involving printed as well as video-screen messages; the proliferation of nation-wide and world-wide communications satellites; the incipient impact of home video cassettes -- all of these engineering wonders are now technically possible and await only the genius of intelligent capitalization and marketing, and, where warranted and necessary, prudent public interest regulation."

PROJECT MOPPET:
A MEDIA ORIENTED PROGRAM PROMOTING EXPLORATION IN TEACHING

by Alfred D. Kohler, Gloria Alibani,
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ESEA Title III - Office of Program Development, Division of Research Planning and Evaluation, New Jersey State Department of Education

Project MOPPET is currently entering the third year of operation in the Woodbridge schools. In a broad sense, the program is a humanities program that has the general goal of humanizing the curriculum. The program is designed to promote creativity in children and help them build a positive attitude toward school, which, in turn, generally leads to better achievement.

In Project MOPPET, the word MOPPET is an acronym standing for Media Oriented Program Promoting Exploration in Teaching. The word exploration is the key, for MOPPET is not intended ever to be a final finished product. Rather, MOPPET is the pathway through which the classroom teacher may gradually master a process which will lead to further exploration.

The primary focus is on the arts: poetry, movement, art, creative drama, music and film. The arts are the areas of human expression that are most commonly neglected in the standard curriculum. Therefore, the student who is not primarily print-oriented is afforded a chance to be successful within his own classroom setting.

Now, we will turn to an examination of the content and structure of the various arts. First, we will start with creative drama.

Creative drama is one of the least understood areas of the arts. The goal in creative drama is for the children to gradually master the art of creative improvisation. The focus in creative drama is the inner development of the individual as it occurs in interaction with others.

This has all kinds of values to the individual in terms of confidence and a healthy self-concept: learning to work in cooperation with others, learning to think and improvise creatively in action and dialogue, and learning to spontaneously speak personal thoughts and feelings in other language arts experiences. This kind of activity has applications to the conventional theatre-oriented conception of drama. Gradually, the children grow and gain control over the involved elements, such as: body control, interaction with others, the use of space and the use of dramatic form.

In art, the lessons are begun in the kindergarten. The lessons expose children to the basic elements of design and materials utilizing film media. Media, integrated with the more conventional art materials to greatly enrich lesson input, will ensure that the resulting student statements reflect a dynamic personal involvement. This approach is maintained throughout the grades while introducing more sophisticated techniques. Eventually, students will become familiar with the main elements of art and find them exciting and challenging when expressing themselves through this medium.

Consequently, each child will employ the forces of the pure elements in such a way that the final concrete image will be as a mirror of that individual child creator. An outgrowth of this stress on individuality will be a respect for individual differences. Children will be proud of their art work and see it as an extension of themselves. A sense of self-concept, as well as respect for others, can be established through art that is taught in such a manner.

In our poetry lessons children learn, first of all, that poetry is the personal language of feelings, more or less. All children are poets when they express themselves naturally and honestly. Consequently, teachers must learn to be accepting of children's honest feelings. If teachers are not accepting, they will never learn what children are really like.

We are aware that there are many approaches to teaching poetry, but we believe our approach is the closest to the natural flow of the children. Rhyming and other sophisticated devices are avoided in the beginning, because they get in the way of natural expression and create artificiality. In their development, contact is maintained between the expression of their feelings and their language development.

In our music lessons, we are not concerned with teaching songs or instruments. Rather, the concentration is on developing an awareness of the elements which make up music, reinforced through various clapping and stamping and vocal games. Children should understand that the elements of music are simple and easy enough for all to understand and enjoy.

Movement lends itself to interdisciplinary activities. Consequently, virtually any kind of subject matter can be used as motivation and as a vehicle. It has been said that dance expresses life, and it can be made to do so in the school setting as well. As with creative drama, movement provides opportunity for physical and emotional development and becomes a stimulus for individual creative growth.

The goal is to encourage the student to learn to convert space, as with any blank piece of paper, into a personal tatement. The body should be considered as a total and completely self-sufficient instrument. The joy that arises for the student at the realization of his totality is not only fascinating but also a lesson for the teacher; therefore, it is very rewarding for all involved.

One of the most interesting aspects of MOPPET is the use of media. We try to confine ourselves to the standard machines such as the 16mm sound film projector, 8mm silent film projector, 8mm silent loop projector, slide projectors, overhead projectors, film strip projectors, cassette recorders and record players.

Standardization of machines in the various schools within a school system simplifies the job of creating lessons which use duplicate materials. This, in turn, simplifies dissemination of lessons.

From the standpoint of using media in MOPPET lessons, films, slides and other materials are not used as an end in themselves. For example a film is not used as entertainment. After all, we don't need a special program to do that. What we do in MOPPET is to use such materials for specific purposes of motivation, explanation, etc. Media definitely can very easily do all sorts of things that the teacher in mere words cannot do. However, this use of media is merely part of the lesson process that culminates in the involvement of the students in some sort of creative experience. As a stimulus to the imagination and its creative urge, the use of media in this manner is a tremendous teaching tool.

In MOPPET, the lesson process illustrates only one approach to the use of media. The second is to teach the children to make media products of their own. In various activities we have developed film making lessons for every grade level, K-6. In making their own movies, kindergarten children need a great deal of help. By the time they reach the intermediate grades, they are capable of handling the whole process with only a minimum amount of teacher guidance. They can create animated films and mini-documentaries which are quite sophisticated.

Eventually, the children learn to run the machines as well as make media products. At this point, they are able to emulate the teacher and create media presentations of their own. It is interesting to note that, if properly trained, children are no more destructive of media machines than are adults.

We must remember that words are a great tool, and we should never delude ourselves into underestimating the motivational power of media. After all, the motion picture and TV have virtually transformed the earth in this century. Children respond to media; and, if teachers wish to compete successfully in the future, they must learn to use it.

MOPPET lessons are designed to be taught in a standard classroom. However, many lessons are more effective when taught in a room in which the children have named the MOPPET room. By the use of a curved screen at one end of the room, we are able to create different environments and transport the children completely out of the customary school atmosphere.

The fact that MOPPET lessons always contain a positive learning situation assures that children will respect their achievement. This is important because the lessons are obviously enjoyable to the students. Unfortunately, there are still many adults who feel that a lesson which students

enjoy must be entertainment rather than a learning situation. The burden of proof is, of course, on us. So, we have constructed a testing program to monitor the effects of the program.

Admittedly, this is difficult to do; for humanities programs do not lend themselves easily to evaluation. A broad testing program has been developed over the past two years to evaluate the effects of the program. The data is not large enough to support dogmatic conclusions. However, all the evidence supports the value of the program in terms of creativity and a positive attitude toward school.

We have considerable evidence that the poetry lessons, for example, benefit children in the language arts; that creative drama benefits children in their self-image, ability to work with others, and general esthetic development; that our art lessons result in a more creative and original approach to ideas and materials. We have no way as yet of testing the direct efforts of the program on general curriculum performance, except the evidence that MOPPET children generally tend to perform better than non-MOPPET children. One thing appears certain - the positive benefits the children receive from MOPPET lessons are not achieved at the cost of neglecting the standard curriculum.

Quite the opposite seems to be the case that the arts and humanities promote performance beyond what can be immediately measured.

USING MEDIA IN ART

-- Gloria Alibani, Art Teacher
Project MOPPET

Miss Gloria Alibani, Art Teacher in Project MOPPET, demonstrated how triple screen projections can be effectively used to create partial environments and convey ideas concerning elements of art, such as line and color. Environments depicting these elements were visually presented through the use of slides and overhead transparencies. The functional value of the triple screen projection in art was explored, and consisted of two basic approaches -

1. use of three similar projections to create a uniform environment -
2. use of three contrasting projections to enable comparisons to be made.

Three lessons exploring color and line were presented and discussed. The first color lesson concerned the emotional impact of color, and the more specific - technical aspect of color mixtures. Slides taken from the book, The Great Blueness and Other Predicaments by Arnold Lobel, explored color in relation to feelings and provided a great stimulus for verbal interaction among the children concerning their observations of the visuals and descriptions of their feelings. Color mixtures from primary to secondary colors was also depicted. Miss Alibani stressed the fact that the children are free to stand or move in front of the visuals, and thus be totally covered by the colors of the slides.

The use of media as motivation for a painting lesson was also presented. A color lesson, contrasting the emotional responses to a world void of any color and an extremely colorful environment. These contrasting scenes were created through the use of transparencies and three overhead projectors. The children then visually represented their responses to the changing environment through tempera painting.

A lesson exploring the element of line was also presented. Overhead transparencies depicting lines illustrated how the triple projections create an exciting approach to line comparisons concerning the following concepts:

1. types of lines (straight, curved, angular)
2. line quality (thick lines, thin lines)
3. quantity
4. movement (direction)

The children, verbally and physically, express their perceptions concerning these line concepts through discussion, movement (the children move like the lines move) and the use of art materials.

The use of media as an exciting and important motivational factor in the art lessons was emphasized by Miss Alibani. The enthusiasm of the children after experiencing media in the classroom or in the environment of the MOPPET room validates the importance of media in education today.

USING MEDIA IN CREATIVE DRAMATICS

-- Anne Battle, Creative Drama Teacher
Project MOPPET

Mrs. Anne Battle stressed primary values, achieved through including creative drama in the teaching of the curriculum as being development in verbal and non-verbal communication, creative problem solving ability, awareness of uniqueness about self and abilities.

Mrs. Battle demonstrated several uses of media that she utilizes in motivating lessons in creative drama. Along with presenting the media used, Mrs. Battle discussed the follow-up activity which occurs after the media motivation involving student participation in body movement, theatre games, improvisation, creative writing or art experience.

Using a triple screen, Mrs. Battle demonstrated how a film loop entitled "The Butterfly" could be projected on the center screen and two slides of trees projected on either side of the film loop. Viewing of the slides and loop are used to motivate discussion and lesson that all of us are gifted and unique. Children imagine and act out pretending to be butterflies emerging from a cocoon and flying about the world absorbing new sounds, sights and images. Discussion and dramatization of situations that children find comfortable in their real lives and how they fear leaving surroundings such as a couch, bed, home to enter; strange environments such as a strange store, the dentist's office, the school, etc.

The use of the overhead projector in motivating a drama lesson focusing on feelings and sensations of being up and down (sad or happy) was demonstrated. Mrs. Battle showed how small construction paper letters could be placed on the overhead with an arrow symbol to motivate vocabulary and discussion of up and down (sad and happy) feelings, culminating in creative drama activity.

The potential of storybooks which can be used for drama activity and the usefulness of specific books whose illustrations can be photographed and converted into slides through the use of the ektographic kit was discussed and demonstrated. The quality and quantity of lesson hints in copies of Childcraft published by Field Enterprises and works, such as Harvey by Hoban (dealing with sibling rivalry) were specifically discussed.

Mrs. Battle demonstrated the use of a 16mm sound film strip, "What's If", manufactured by Encyclopedia Britannica Educational Corporation to introduce drama improvisation and discussion dealing with values in cheating, stealing, etc. was demonstrated.

During the final aspect of the demonstration, the use of a series of three slides shown simultaneously on three screens joined together to motivate discussion, body movement and improvisation occurred.

a. Three slides in shades of red to motivate lessons in situations that engender the feelings of red and foster a mood for dramatic improvisation.

b. Three slides of two boys walking along a polluted beach.

c. Three slides of a country environment to motivate an adventure story in which a crisis occurs.

d. A series of slides of abstract paintings which motivate moods or specific environments from which drama can be developed.

YOUR TV EQUIPMENT CAN DO ANYTHING

by David Israel
Port Washington, New York

We educators are told that students need more individualized activities and more involvement in school related processes for the most efficient learning. My feeling is that television can provide that input to some students, including a few of the "faceless" kids that seem to disappear in the building. Not only can they use their abilities to produce and direct programming, but they can provide the technical help you need in developing your equipment to its greatest potential. Through the use of shop projects, "Ham" radio operators, and science projects, much of what is presented here can be used by you.

Your very first acquisition should be an inexpensive (between $6 and $10 at Radio Shack & Lafayette) audio mixer; with it you can use more than one microphone, and mix music directly from records or cassette source. For long microphone runs, possibly a low impedance transformer for your microphone would be a sound purchase (Shure Bros., $15), the cable would convert your good low impedance stage microphone with that extra long cable (theoretically, you could run the mic the entire length of your building) to high impedance at the input end of your mixer or VTR.

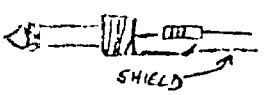
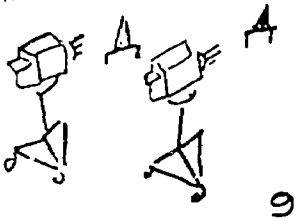
If you have short distance problems, where you cannot place a microphone cable, or desire clandestine placement for teacher self evaluation, the Lafayette FM wireless microphone is a must - the device works off a nine volt "transistor" battery, and will transmit to an FM radio through even the thickest brick walls of your building. The output of the radio can be connected to the mixer or VTR while the mic and transmitter sit in an open desk drawer or hollowed out textbook! In the November 1972 Popular Electronics and most VTR maintenance manuals, circuits for small video transmitters for channels 2 - 6 are given; these are small and provide the same service for television cameras.

If you want to videotape film, filmstrip, or slides, and you have the permission of the copyright holder, you must utilize a film multiplexer of some type. Commercial outfits and wealthy schools (mine not included) have film chains which are special devices that have shutters that are cut to project the twenty-four frames per second of a film thirty times per second to eliminate a "beat" line in the picture - you've seen them whenever you have seen a film of a TV set, a black, thick line that moves downward across the screen every six seconds!

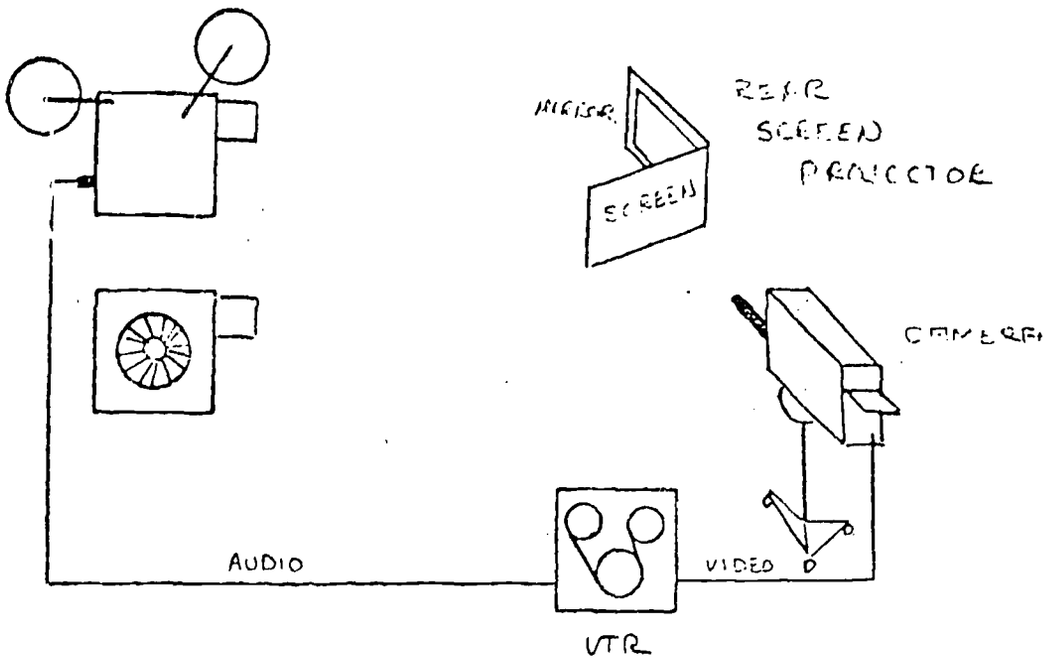
Since you do not have the $1700 for even the most inexpensive of film chain projectors, let me show you the next best thing. This is a mirrored rear screen projector, the camera with a close-up lens attachment sits in front of it. The output from the projector runs directly to the line input or to the mixer input. A combination of a high beam adjustment on the camera, and the intensity of the light almost directly into the camera provides excellent quality and image retention in the vidicon to all but eliminate the "beat."

You have two reels to show and you do not feel like editing, or you want to dissolve carousel projectors, or you want to "mix" slides and film, then you must have the projectors aligned on the screen perfectly. The size of the lenses for 16mm and 35mm slides are shown on this chart along with the area covered by both. Thus, you can use this chart to determine the lens you need for your Bell & Howell or Graflex projector to project from that long distance in your auditorium and not lose half the picture and light, and the lens for the slide projector. For television work, you can build this device, a wooden holder that the projector mounts on. This device can be used to align the projector's images on top of each other, and can be used in conjunction with the following dissolve system.

Among the many useful publications from Kodak is this one that indicates circuitry and plug configurations for the Kodak Carousel line of projectors. One very simple device is a manual dissolve unit, utilizing an incandescent light dimmer available from Lafayette or Radio Shack. These dimmers are sold to mount on walls and are good to 600 watts; for your use, however, you mount them on a box with the "light" plug on the wires. Two places on each side of the box are left for the advance/reverse and focus remote controls as shown. The device works very well in conjunction with a stereo recording...channel A with the narration for the audience, and channel B with cueing instructions for your headset.

FILM - SLIDE CHAIN SLIDE FROM CH 7 1	PHOTO OF MIRRORED REAR SCREEN PROJ. W/TV CAM & PROJ & SLIDE ON WOODEN TABLE 2	SEE PAGE G-3 (DRAWING OF ARRANGEMENT) 3
KODAK PAMPHLET S-41 FIRST PAGE 4	SEE PAGE G-4 (CHART OF COMPARISON) 5	SEE PAGE G-5 (CAROUSEL CIRCUITRY INFO) 6
PHOTO COPY TOP P 357 ALLIED - RADIO SHACK CAT 300 LAFAYETTE P 351 CAT 710 7	PHOTO OF phone plug w/RESIST SOLDERED ON END  8	CHART BOARD PHOTO  9
FLIP BOARD SKETCH PAGE G-6 10	PHOTO OF TALENT W/TITLE SUPERIMPOSED IN WHITE 11	PHOTO OF LIGHTING GRID IN STUDIO 12
LIGHTING SKETCH P G-7 13	PHOTO COPY P 346 BOTTOM RIGHT ALLIED - RADIO SHACK CAT 300 14	P 314 - ENTIRE PAGE CAT. 300 - ½ FRAME VIDEO PLUS MONTAGE ON RIGHT SIDE 15
Photo of decode box connected 16	MONITOR SKETCH P G-8 17	SWITCH SKETCH & Photo P G-9 18

PUSH BUTTON SW. SKETCH P G-10 19	POLARITY REVERSAL SKETCH (PHASE INVERTER) P G-11 20	FLYING SPOT SCANNER SKETCH P G-12 21

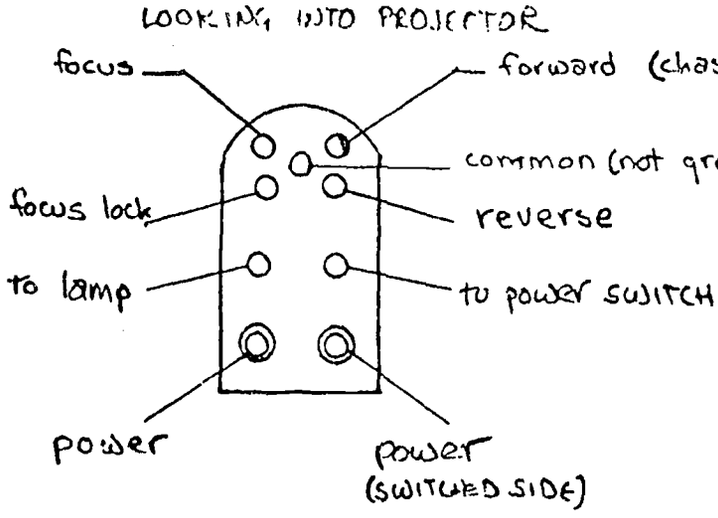


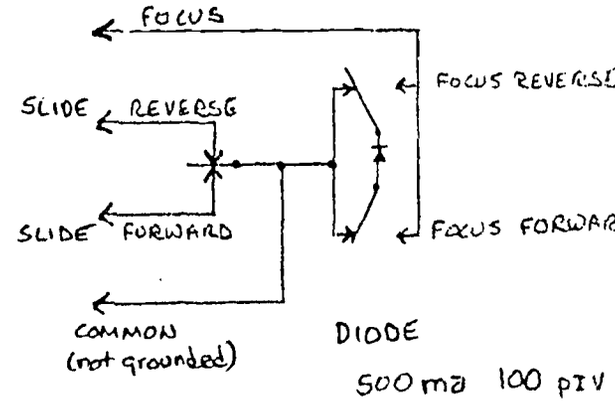
G·3

PROJECT. LENS SIZES (INCHES)

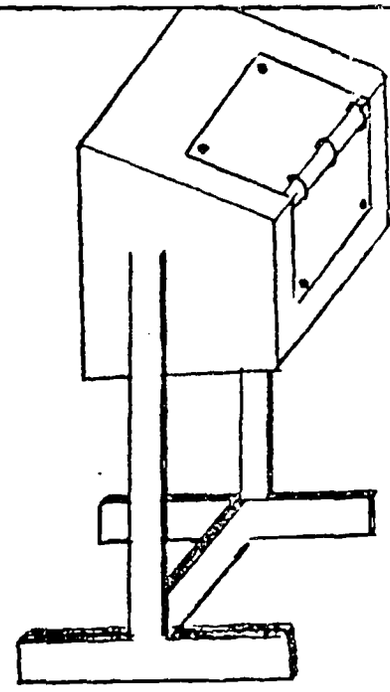
16 mm	2" *	2½"	3"
35 mm (2 x 2)	7" *	10"	12"
FILMSTRIP	4¾"	7"	8½"

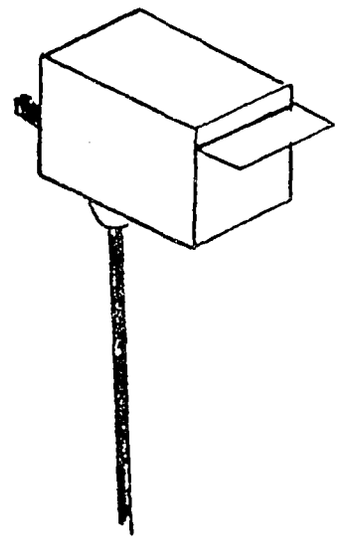
* STANDARD ZOOM RANGE

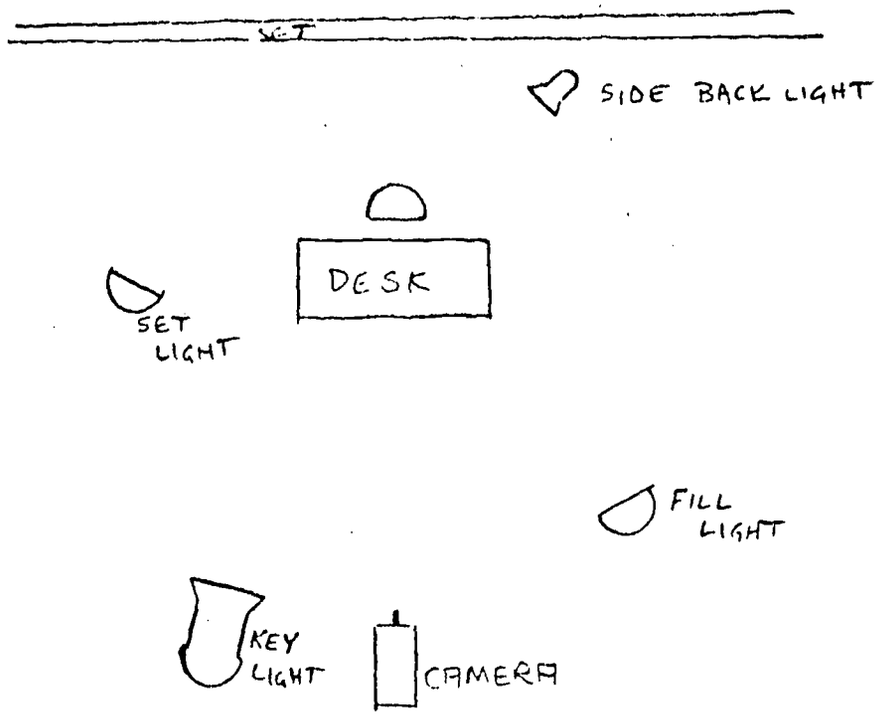

LOOKING INTO PROJECTOR
focus
forward (chassis ground)
common (not grounded)
focus lock
reverse
to lamp
to power switch
power
power
(SWITCHED SIDE)


FOCUS
FOCUS REVERSE
SLIDE REVERSE
SLIDE FORWARD
FOCUS FORWARD
COMMON
(not grounded)
DIODE
500 ma 100 PIV

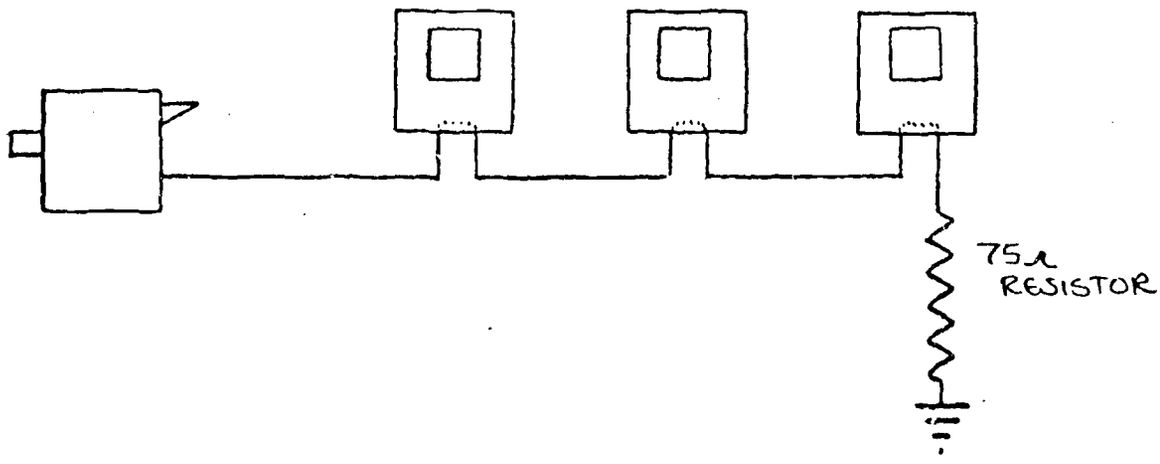
G-5

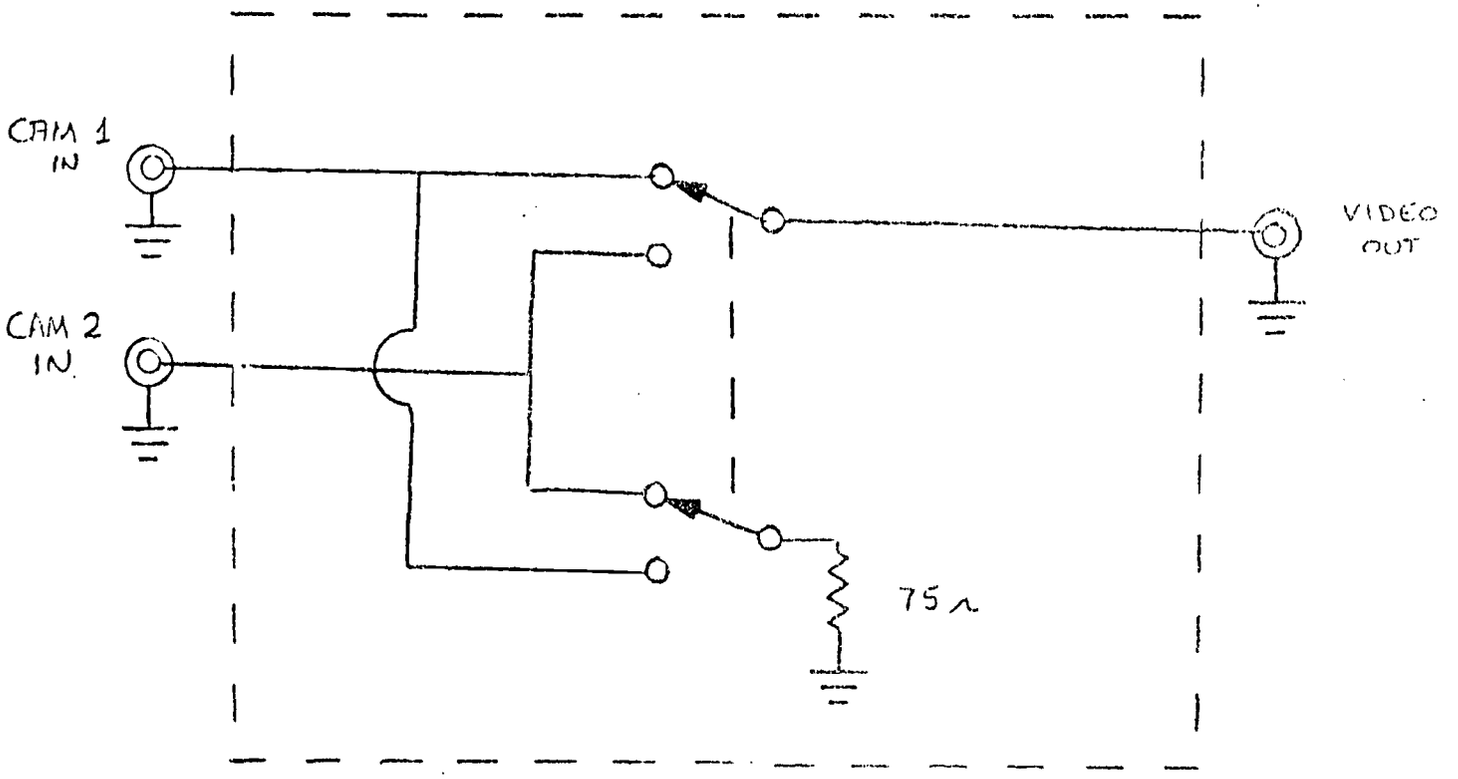




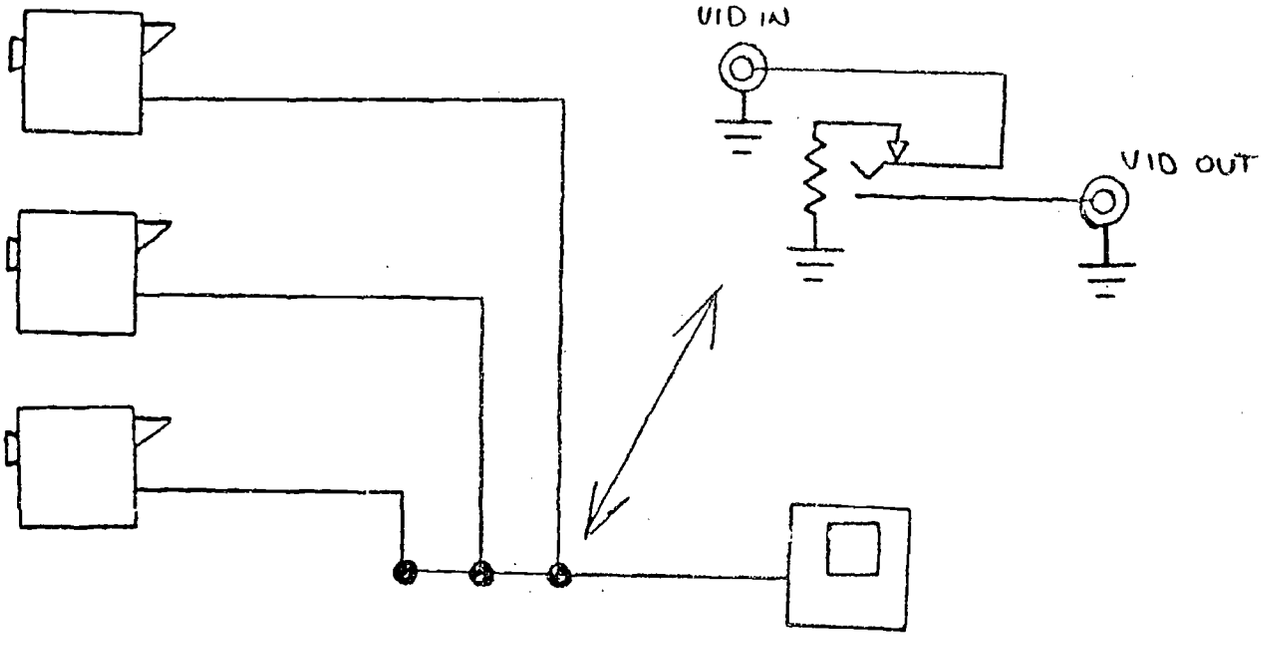

SET
SIDE BACK LIGHT
DESK
SET LIGHT
FILL LIGHT
KEY LIGHT
CAMERA

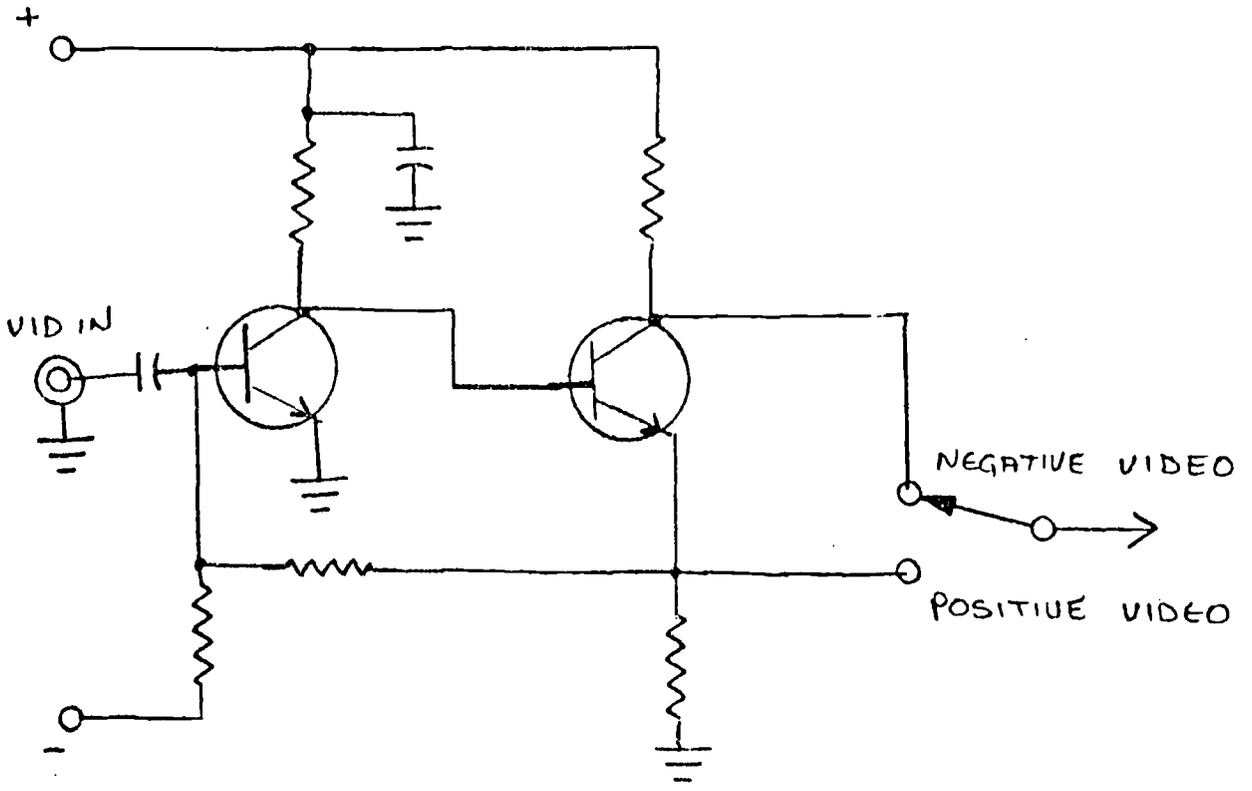
G-7


75Ω RESISTOR

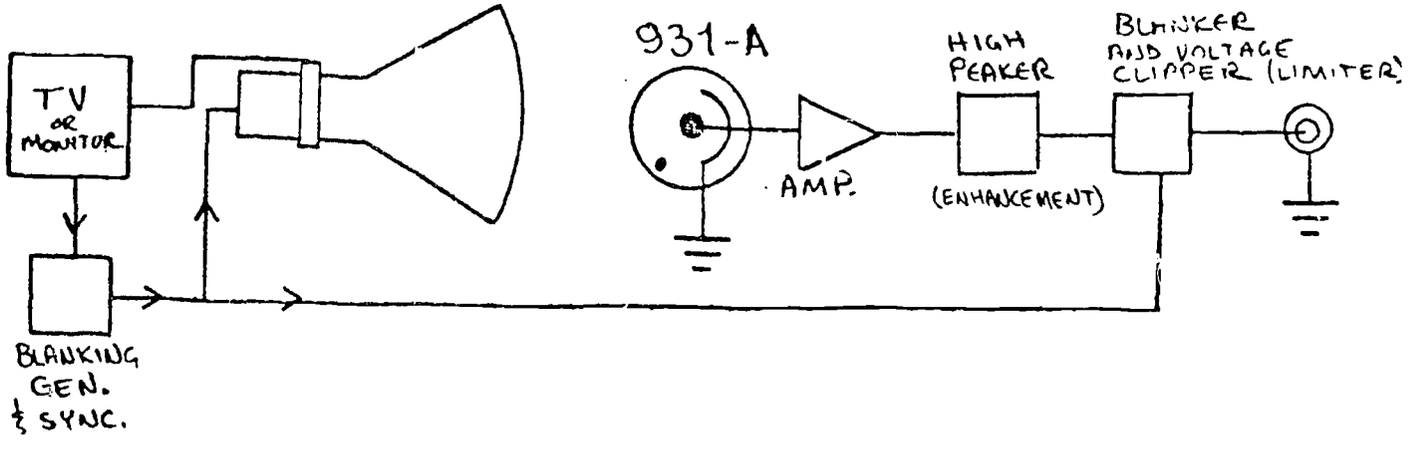


G-9




+
VID IN
NEGATIVE VIDEO
POSITIVE VIDEO
-

G-11


TV OR MONITOR
931-A
AMP.
HIGH PEAKER
(ENHANCEMENT)
BLANKER AND VOLTAGE CLIPPER (LIMITER)
BLANKING GEN. & SYNC.

Assuming you are planning to use these devices, you still have a problem with the audio. You must get the audio from the projector, record player, or tape recorder. The proper output plug, which will be discussed in a little while, must be used to the line input. If you do not have a line or radio/phono input on your machine, solder in series with the center wire on the plug a 680Kohm resistor. This allows you to plug the device into a microphone input without overloading the circuit.

Now I am going to assume that your district is not going to spend the five to seven thousand dollars necessary to purchase one of the graphics consoles presently on the market. Let me show you some of the devices we use in lieu of them: This is the chart board. Two of them side by side, each with a camera, allows rapid switching of graphics. The pictures can be prealigned with each other, but even that is unnecessary to a relatively experienced cameraman. By using two, camera movement or editing is not needed, since you can switch or wipe between cameras. An even more useful system to use, if you have a friendly print-shop teacher who will prepare visuals for you, is the flip board. Similar to the chart board, the cards flip over into view. This system is very useful if you have a matte-mode on your special effects generator, for such things as names and titles can be put into their proper place almost instantly without any special switching adjustments.

Lighting is an important facet of TV production. In this photograph you can see what we did in our studio with some inexpensive piping. Until this year, in fact, we used photographic lights that were faded with a large rheostat. The proper arrangement makes a big difference, even though your camera was advertised to be sensitive to even one-candlepower of light at ten-thousand yards! The simplest system consists of:

Key Light - the major source of light on the subject, the light that forms the subject's shadow.

Fill Light - used to illuminate scene, lessen shadows and determine the contrast.

Back Light - used to separate subject from background.

More involved lighting can include:

Set Lights - to illuminate various portions of the set differently.

Eye Light - to effect a desirable reflection from the eyes of the subject.

Side Back-Light - (kicker) helps give a three-dimensional effect by further emphasizing the separation of talent from the set.

You can pick up some rather good lights for about sixty dollars each, and you can use the 600 watt dimmers for them to give you tremendous versatility.

In your career as an audio-visual coordinator you have most certainly been approached by a teacher that wants to dub something to something else, such as reel-to-reel to cassette, or record to cassette. If you found yourself frustrated, let me be of help. All you need are a collection of audio adapter plugs, and, for fancy work, a resistance-capacitance decade box (a $4.95 item from Radio-Shack). Let's take a look at the different plugs and learn their names:

Cannon three pin male and female
Phone plug male
Phone plug for Bell & Howell projectors
Phone plug
PL-259 standard video plug
BNC video plug (Ampex 6000)
F-59 GE state contract receivers video & RF
Stereo phone
½" Japanese eight pin plugs

This chart indicates how they are wired.

When audiotaping onto a cassette from a line output or speaker output, with cassettes that have Automatic Level Controls, it is necessary to put a resistance in series with the line, usually between 470Kohm to One Megohm, and some capacitance across the line to balance for tone. The decade box is perfect for that use, as shown here.

Some of you that have video equipment are familiar with the concept of "termination." I will not go into the technical details here, but suffice to say that unless a video source, such as a camera or videotaperecorder, sees a 75 ohm impedance (a fancy way for saying a 75 ohm resistor) at the end of its feed line, it is not going to feel well. For example, if you have a string of monitors connected to a camera or VTR, the last monitor must be terminated. The most common way is to solder a 75 ohm resistor into a PL-259, BNC, or F-59 plug and put it into the bridged video receptacle (or a T-connector) of the last monitor in the line (even if only one monitor is used). Long wires in two directions must be avoided; everything should be wired as shown.

Now, before I had mentioned that I would show you how to make a simple switch for two cameras: here it is. Notice that when one camera is on, the other goes into the 75 ohm resistor (the videotape input has a 75ohm resistor inside the machine), and vis. versa when the switch is changed. We use this at football games, when our regular switcher will not operate because of the cold!

You can readily work out a push-button circuit to handle three or more cameras as shown, with a 75 ohm resistor at each button, and in no way do you change the configuration of the camera, or need separate synchronization.

Now, the last two techniques I will discuss are rather technical in nature since they deal with circuit construction. Any student with a minimal amount of electronic construction can build these circuits, so you may be interested. The first is a polarity reversal circuit, a circuit that makes blacks white, and whites black. This circuit should be connected before synchronization is added to the video for best results. The circuit is basically a phase inverter, which provides us with a voltage 180° out from the incoming voltage. It is a common circuit in audio amplifier construction.

The last circuit is also easy, and rather intriguing. It has been known for a long time, but until recently never given much publicity. About four years ago, a commercial TV manufacturer put it to use in allowing the home viewer to show slides on his color TV screen by putting the carousel in a special place in his TV console.

The configuration is called a "flying spot scanner" and works on the principal of the moving electron beam of the monitor. In this diagram the raster of the monitor is lit, which means that lines are being "painted" on the screen in the normal fashion. If I place a cell between the screen and a photocell, whenever the spot hits black, the photocell will not conduct. Thus, a video information signal, in sync, is developed. The circuitry presented here is just an example, since almost any configuration for high frequencies will work effectively. Just remember, though, in order to prevent a black border, put a low, but heavily power rated, resistor in line with the low voltage power output so that the entire sweep will be on the monitor screen. I will be around after to speak to anyone who wants to tackle these two construction projects.

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SELF-INSTRUCTIONAL MODULES FOR INSERVICE CONTINUING EDUCATION OF N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION EMPLOYEES

by David L. Hanselman
SUNY College of Environmental
Science and Forestry

and

James E. Lesch
State Department of Environmental Conservation

How is your imagination this afternoon? Well, if you are the sort who can put yourself in the place of Captain James Kirk or the Vulcan, Captain Spock on Star Treck--or if you can watch Night Gallery in the same mental frame that you view Walter Cronkite, you might have survived the metamorphosis of the former N.Y.S. Conservation Department. For years this Department had been responsible for fish and wildlife, lands and forests and other essentially rural natural resources.

But this is not yesteryear. And today's environmental problems called for a modern State Department which could address itself to the whole panorama of environmental ills. And thus, in one of the most sweeping and brilliant moves ever to take place in state government, the N.Y.S. Department of Environmental Conservation was born on Earth Day, 1970 as Governor Rockefeller signed into law the historic legislation for the protection of the environment.

It's one thing to generate implementing legislation. It's quite another to make it work. Let's focus in on the newly defined job of the Conservation Officer. In 1880 eight men were hired to enforce the fish and wildlife laws. Known as Game Protectors or Game Wardens, their responsibilities had changed little in nearly a century, but their ranks had grown to 240 officers. Suddenly, these men, now called Conservation Officers, were thrust into wholly new job responsibilities. Let me quote some of the new tasks detailed in the most recent job description for this position:

1. The Officer enforces State law relating to the conservation of all fish, wildlife, shellfish, crustacea and protected insects.

2. He inspects and reports violations of landfill areas.

3. He patrols inland waters and tidal marshes, bays estuaries and the Atlantic Ocean within three nautical miles of the coastline, checking pollution complaints and conducting required tests and samplings.

4. The Conservation Officer investigates sanitary, industrial and scavenger waste discharges. He inspects sewage treatment plants, boat holding tanks, stores selling detergents.

5. He detects and documents air pollution violations by inspecting smoke stack emissions, incinerators and diesel engine emissions and investigates open burning.

6. The Officer investigates violation of the law protecting 398 species of endangered fish and wildlife.

7. He is responsible for stream protection and insures that no alteration to waters, coastlines, marshes or wetlands is begun without a proper permit and he insures compliance with the terms of the permit.

8. He inspects stores for violations in sale of various pesticides and seizes illegal products. He investigates illegal use of pesticides.

9. The Officer has responsibility for public safety including rescue and relief work during floods, forest fires, and other natural disasters. He searches for lost persons.

10. The Conservation Officer is an important liaison between the Department and the public. He answers inquiries and provides information on Department programs and the environmental conservation law. He must be a public relations expert for almost all aspects of his job involve meeting and communicating with the public.

And once he was just a game warden! Many other types of jobs in the Department underwent similar redefinition. So there emerged a massive need for extensive re-education of Department personnel. The task would be sufficiently difficult if they all worked at the Albany office and if it were possible to "close the shop" and send everybody back to school. No such luxury--employees had to assume new tasks and learn new skills and concepts while on the job. Further, of the nearly 3,000 employees, only about 800 are in the Albany office. The rest are assigned to the nine regions of the State and even with the regions are geographically scattered according to the job requirements.

(Slide 1) In the next few weeks the 240 Conservation Officers and many other Department personnel--from field laborers to administrators will be visiting the new learning resources center at the Department's Albany headquarters,

(Slide 2) . . . or will be using cassette tape players and carousel slide projectors in regional offices--and even in homes--to start training in public information. Here is a part of this particular auto-tutorial module:

PUBLIC INFORMATION SAMPLE--SLIDES-TAPE

In the area of public information and communications, other modes of instruction are also being used including texts, bulletins, and short courses which have been conducted both by The College of Agriculture and Life Sciences at Cornell and by the S.U.N.Y. College of Environmental Science and Forestry.

Administration of the continuing education program for D.E.C. employees is handled by an Inservice Training Office. Ironically, the new Department came into existence just as the State's fiscal clouds began to form and funding for inservice education has been meager. But fortunately for employees and administrators, the Civil Service Employees Association, which represents most State employees, negotioted in annual contract provisions for funding employee training and development. Some of these funds were made available for "experimental" approaches to training. And it has been this money which fostered the development of auto-turorial modules for D.E.C. personnel. It should be noted that the interest of employees and their organization in training and continuing education stems partly from the fact that promotion within State service is usually through examinations of some sort. And with this new inservice education, it is possible through a series of promotions to attain a position of responsibility and remuneration equal to what one would be able to command with additional formal education credentials. Thus, the inservice education and training program seeks to provide a career ladder for employees and a means of preparing them for the additional responsibilities the Department assumes in its new role of statewide planning and managing environmental resources.

We do not want to imply that we sought a "one method" cure-all for inservice education. Far from it. For example, workshops and short courses have recently been conducted on pesticides, air pollution monitoring and forest ecology and pathology. More are planned. But, as we noted earlier, the logistics of re-educating and up-dating employees made self-instruction modules the only feasible means of handling the bulk of the training program. Because the Department already owned slide projectors and cassette players, and because the purchase of a few more such units was not going to entail a major expenditure, and because employees were not intimidated by this equipment, slide-cassette tape modules were decided on as the best format for statewide self-instructional continuing education.

The inservice training people first consulted with managers of various line programs to determine a priority of needs. This resulted in requests for training programs in such diverse areas as "public information training," "basic surveying," "how to report a forest insect or disease outbreak," and "algae and their environmental significance." Next, continuing education and communications specialists were consulted at the College of Environmental Science and Forestry. Various subject matter expertise was found both within the Department and at several Colleges and Universities. Every attempt was made to keep from "re-inventing the wheel." For example, it was found that several students at the College of Environmental Science and Forestry had produced slide-tape units on such subjects as the biological indicators of water pollution. These were duplicated and are now incorporated in the training program. To produce modules not in existence, instructional developers were hired to work with Departmental employees. Parameters covering program objectives, educational level, subject specificity and viewpoint were first established and then the program was built around these criteria.

At this point in time, only about a dozen of the 50 or so modules have been completed and are in use. Many others are in various stages of production. Quite honestly, some have had to be altered considerably from initial drafts as program supervisors find themselves re-defining the professional and technical roles of their employees. But this is as it should be. We expect up-dating will be necessary for most modules. We are convinced that this new venture in inservice self-instructional education is paying off in developing employees better able to cope with new line responsibilities and high espre de core is being fostered by providing men and women with the opportunity to move up in position and salary through inservice education. We would recommend this format to other agencies with similar needs for inservice education.

Now, let us present excerpts from a couple of modules and then we will be happy to answer any questions you may have.

MEDIA AS A MEANS OF DISCOVERING 15TH-16TH CENTURY CHILDHOOD

by Mel Tucker
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Buffalo, New York

I. Introduction: The Application of Thinking Visually to the Historical Reconstruction of Childhood.

Children = birth to age seven during 1140-1650.
Use of visual presentation to examine the medieval-early modern values demonstrated by the treatment of children.

II. The Medieval - Early Modern Child Illustrated By Slides.

A) Birth to Two Years (Swaddling, Feeding, Walking, the Christ Child).
B) Playing.
C) Education (and Punishment).
D) Working.
E) En Famille.
F) Sexual Play (was there infantile sexuality?).

III. What Do The Slides Tell Us.

IV. Analysis of Redesigning and Reorienting of Teacher to Think Visually.

A) Scarcity of Visual Materials.
B) Retrieval Problems (Indexing Slides, etc.).
C) Sorrows and Joys of Visually Thinking and Presenting.

Books of Interest

Philippe Aries, "Centuries of Childhood", N.Y.: Knopf, 1962.
David Hunt, "Parents & Children In History"...N.Y.: Harper Torch: 1970.

Both will be revised and supplemented by the history of childhood project sponsored by the Association for Applied Psychoanalysis, Inc.

My subject this afternoon, media as a means of discovering 15th-16th century childhood, forms part of a larger enterprise to redesign myself as a teacher who is able to think visually and use media to the fullest possible extent. My personal plan for redesign is born of a conviction that it is easier to make students really see and understand what one is talking about when one assaults their visual as well as their auditory senses. I wish to illustrate this process by presenting a brief slide lecture on children followed by an equally brief analysis of the problems one confronts in a curricular redesign of one's teaching.

Everyone recognizes children. They're smaller than we are. Their size is a function of their age. For our purposes, children will be considered from birth to age seven. Historically, they will be the children of Europe, but mostly England, from 1140-1650. What we are trying to discover is what was it like to be a child then? How did parents treat their children? Did they love them, use them, beat them, discard them, abandon them, or ignore them? And why did they do what they did to them?

The following slides are arranged to tell a simple story of children growing from birth to age seven.

Slide Number	Descriptive Data
1.	Lieing-in, 1465-1470 Peiper, p. 109 Wealthy woman giving birth, midwives in attendance. No men allowed. Case of Dr. Wertt of Hamburg, 1522 - burnt for disguising self as midwife and attending a birth.
2.	Swaddling, Middle Ages "Once bathed the infant was wrapped tightly in swaddling bands, in order to press the limbs and body into good shape, to remove deformities produced by birth, and to prevent any injury. Each limb was wrapped separately with bandages of seamless clean wool three fingers-breadth wide. Then the longer bandages were used to wrap the whole body into a state of near mummification. Boys were wrapped evenly all the way. Girls were wrapped more loosely around the hips. The last swaddling bandage started round both feet, included both arms, and ended at the neck." Harvey Graham Eternal Eve: The Mysteries of Birth and the Customs That Surround It (London: Hutchinson & Coltd. 1960) p. 100.
3.	Swaddling 1449 Peiper 38. How long was it maintained? Case of little Louis XIII born in 1601- Left his arms unswaddled at 5½ months Unswaddled completely by 8 or nine months
4.	Swaddling 1633- Did the swaddling clothes ever come off? "The Lady to the Nurse: How now, how doth the childe? Unswaddle him, undoe his swaddling bands, wash him before me...Pull off his shirt, thou art pretty and fat my little darling...Now swaddle him againe, But first put on his biggin and his little band (collar) with an edge, where is his little petticote? Give him his coate of changeable (shot) taffata and his sattin sleeves: Where is his bibbe? Let him have his gathered aprone with stringes, and hang a Muckinder (handkerchief) to it. You need not yet to give him his corall with the small golden chayne, for I believe it is better to let him sleepe untill the afternoone..." (1568) Swadding could be, however, an occasion for filth and neglect. Even the Turks in the 16th century were more sanitary than Christian parents. "From Pierre Belon, Les observations, de plusieurs singularitez et choses memorables, trouvees en Grece, Asie, Judee, Egypte, Arabie et autres pays estranges (Antwerp, 1555). 317^r - 318^v. The Turks have a wonderful way of raising little children...For though they swaddle the infant all over, still they leave bare the opening in his bottom. By doing this, they do not have to wash their sheets so often. Their cradles are inlaid in rigidly suspended leather. There they make a round opening, above which the bare bottom of the infant is always kept... A little pot is underneath...and seated or lying in the cradle...the infant does his business into it. Thus they don't need as much linen as we do for infants raised according to our custom, and they are not so smelly. And they are not so annoying or difficult to raise, for even when they begin to grow and to go about by themselves, they keep them seated on the opening in the cradle until they're old enough to control themselves.

Now swaddled infants, covered in front, will piss in whatever bit of linen is put on them; but (the Turks) order this too. They have little tubes made of wood, that are sold by mercers, which are hollowed out and turned up at one end. In the turned up end is placed the infant's member. They make two kinds, one for males and one for females. (The tube then goes between the legs and takes the urine to the pot under the cradle.) This custom is very suitable for the Turks, who are always seated on their rugs. If they didn't do things this way, their children would soil things everywhere."

On the other hand, there were good reasons for swaddling--if not too tightly done--harmful motor activity is restricted, it kept baby warm, made her or him more portable.

Still it may be an indication of repression; why did they do it? Christ as the model.

Madonna with Swaddled Child, 1278-1318-19.

Nativity with prophets Isaiah and Ezekiel
Duccio d. Buonensegna.

Luke 2:7

"And she (Mary) brought forth her firstborn son, and wrapped him in swaddling clothes, and laid him in a manger; because there was no room in the inn.

Child in Cradle, Late 15th century

Child with bottle, 1478 Peiper, p. 40.

Bottle known in 13th century.

Milch pump-
Omnibonus Ferrorius, 1577

Expedients to feed children, goats, cows, human milk.

Breast feeding
Nicolo da Bologna, 14th century
Codex Miniature in Milan.

Sometimes done by wet nurses who overlaid their charges.

Breast feeding 2nd half 15th century
Juan de Castro

Breast feeding Charitas. ca. 1537
Lucas Cranach
Generous, open--wonder about allegory.

Madonna with child 1506
Note rattle (couldn't get picture with pacifier).

Madonna and child. Duer 1520 Peiper, p. 666.

Madonna and child. Duer. Undated. (1471-1521)

Madonna and child. Holbein 15th century

Painter of Henry VIII.

More human, individualized, less stylized, loving children.

16. Casting The horoscope Peiper, p. 652.
von Giorgione 1478-1510

Influence of the supernatural.

17. Child getting bath, 15th century Peiper, p. 39.

18. Learning to walk, angel pushing baby walker.
Fr. Jean Bellegambe, 1467/77-1535.
Nine months to a year.

19. Toys, Walker, Swaddled Child. 1482
From Le Proprietaire des Choses, The 7 Ages of Man.

20. Toys, windmills, medieval.

21. Toys, fife, drum, hobbyhorse, ca. 1300.
Fr. Psalter, 1300.

22. Toys, tops 14th century Fr.
Romance of Alexander, Jehan de Grise 1338.

23. Toys, cup and ball, 16th century
Reminiscent of Thomas More's verses on

CHYLDHOD (Thomas More)

I am called Chyldhod, in play is all my mynde,
To cast a coyte, a cokestele, and a ball.
A toppe can I set, and dryve it in his kynde.
But would to god these hatefull bookes all,
Were in a fyre brent to pouder small.
Then myght I lede my lyfe alwayes in play:
Which lyfe god sende me to myne endyng day.

24. Street games. 1560
Breugel - 55 games there.
All of the above, plus some you may have played -- leapfrog, king of the mountain, marbles, and making mudpies.

25. Punishment, chastisement of scholar 1140.

26. Punishment, teacher switching child 15th century Peiper, p. 41.

27. Punishment, 16th century school, Kennedy
Past into Present No. 11

Query: Why must school be associated with punishment?

Shouldn't it be ecstasy? Cite Leonard
Education As Ecstasy

28. Children Iron Workers, 14th century Kennedy
Past into Present

(also children in woolen industry)

29. Family Scene, wealthy Tudor Family, Kennedy
Past into Present, No. 13

30. Family Instruction, 16th century.
Whole book of Psalmes (1563)

Idea - father as authoritarian, enforcer of discipline. Development of puritan anal. compulsions.

31. Playing with children - sexual implications.
von Marten van Cleve dem Alteren 1527-1581. Peiper, p. 534.

"The practice of playing with children's privy parts formed part of a widespread tradition...The practice of associating children with the sexual ribaldries of adults formed part of contemporary manners."

Aries, Philippe. Centuries of Childhood. New York: Alfred Knopf, 1962, p. 102.

32. Playing with children,
Brerghel. (1564-1638) Peiper, p. 535.

Another example of adult-children sexual play.

III. What Do The Slides Tell Us.

IV. Analysis of Redesigning and Reorienting of Teacher to Think Visually.

A) Scarcity of Visual Materials.

B) Retrieval Problems (Indexing Slides, etc.).

C) Sorrows and Joys of Visually Thinking and Presenting.

V. Discussion.

HOW TO INCREASE TELEPHONE COMMUNICATIONS EFFICIENTLY

by Robert B. Bogdanski
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FOR A TOTAL COMMUNICATIONS SYSTEM, A DISTRICT MUST:

1. Identify a local personnel capable of understanding and conducting such a study.
2. Provide the time and support to develop this study.
3. Allocate the resources and availability of all necessary information and records.

Some things, like the seasons, never seem to change, but today's technological advances almost precipitate changes. For this reason, communications in education is a subject of great concern. Learning must almost be a continuous thing. That is why in education we must be concerned about creating well-designed total communications systems that are efficient, economical, and flexible. If we analyze telephone communications that presently exist in school systems that you may be acquainted with, you may often ask yourself the question, "How did we get into this mess?" The present telephone systems within buildings seem to have grown without any planning or coordination. This may be the result of growth by different administrative styles of school personnel. A demand for telephone service changes as often as school personnel changes. If a building has had a stable faculty and an administrator who has been there any length of time, more than likely the phone system has undergone little change. In another building where the faculty changes and the chief administrator position in that building has had a high turnover, you usually wind up with a system which has grown like topsy. Phone systems are usually added to by different administrative styles, but very seldom are changes made that delete features and equipment. Because of this unplanned growth, you may have similar buildings where the type of equipment, features, and facilities that are available remains unchanged from the day the building was constructed. Yet in another building, it has been added onto, revised, changed, and has far more capabilities than its similar building. Because of this unique growth pattern, many systems have outgrown their usefulness or are too enormous to be efficient.

The personalities of the administrators may range from: The Napoleonic Empire Builder who will acquire anything and everything as accruements to his empire; the traditional conservative administrator whose attitude is it was good enough for yesterday, it is good enough for today, it is fine for tomorrow; to the innovative educator who will build a system without frivolous expansion or frills but as a planned expansion that builds a system that fits his individual needs. With this wide-range of different personalities very seldom does a district take a total look at its total communications needs and consider the broad horizon and vista to build a total system to meet their needs.

WHAT IS AN EFFICIENT TELEPHONE SYSTEM?

A total system should be designed to include all the needs of a district-wide communications system, both internal and external communications. There should be one system to do the job and so designed as to weld together an efficient administrative organization.

What is the role of the public telephone companies? The primary function of the telephone companies, as I view them, is to provide the telephone communications network; and access to this network. As a secondary function, they provide the convenience of leasing telephone equipment to access this network. The world-wide telephone network is a consortium of many industries joined together to provide world-wide communications. In the United States, there is a conglomerate of many different telephone industries regulated by the F.C.C. (Federal Communications Commission), but there is no one phone company. American Telephone and Telegraph Corporation wholly owns the Bell System consisting of Bell Labs for Research and Development, Western Electric for manufacturing

equipment and the Bell Telephone Companies. The Bell System is composed of many phone companies such as the New York Telephone Company; but in New York State alone, there are over 62 independent telephone companies which are not a part of the New York Telephone Company, the Bell Telephone System or the American Telephone and Telegraph Corporation. In the United States alone, there are over 1200 independent telephone companies. All of these phone companies are regulated by state public utility industries either called a public service commission or a public service utility. These service commissions regulate the tariffs or charges that the public telephone companies can bill subscribers for services rendered. By ruling of the F.C.C., and the public service commissions and utilities, the option does exist for subscribers to own and maintain their own telephone equipment or privately lease equipment to access the communications network. The subscriber has the choice before him to lease equipment from the public telephone company or own and maintain his own equipment or lease equipment from independent, privately owned telephone contractors. He is only obligated to secure access to the communications network through his public telephone company.

The Center for Planning and Innovation of the State Education Department, proposes the implementation of a telecommunications network to serve the Boards of Cooperative Educational Services and the Regional Education Centers throughout the State. The proposed network will provide access from major BOCES and REC locations to the existing State of New York Tie Line Network. This arrangement will afford toll free communications between the BOCES, REC's and State Education Department offices in Albany. The cost of providing this arrangement will, in the majority of instances, be offset by the reduction or elimination of presently incurred toll charges alone. Budgeting for communications costs will be simplified since the network costs will be reasonably predictable and stable. It is also anticipated that reductions in travel costs can be achieved if the optional conference calling arrangement is installed.

The proposed network is similar, if not identical, in technical characteristics to the Message Toll Network and can, therefore, be used for low and medium data transmission as well as voice communications.

The network facilities will be provided by the New York Telephone Company and will be available full time.

Participating organizations will be billed only for those facilities required to provide access from their location to the State Tie Line Network, plus a moderate monthly pro-rata charge assessed by the Office of General Services.

The State of New York Tie Line Network consists of centralized telephone systems in Albany, Buffalo, New York City, Syracuse and Utica. State office buildings are under construction in Watertown, Binghamton, Smithtown and Harlem. These locations will be added to the State Network as construction is completed. The centralized telephone systems in Buffalo, New York City, Syracuse and Utica are connected to Albany by switching tie lines. These switching tie lines permit extension users at any of the locations to call any extension at the other locations by dialing appropriate access codes and the extension number.

The SED Telecommunications Network will provide direct access from 40 locations to the State Network and indirect access from 13 other locations. The indirect access will be provided through tie lines to a major interconnection point.

WHAT AM I PAYING FOR?

We will have to uncover all of the facts. The first step is to ask from your public telephone company for a computer printout showing cost of individual items. You will have to become a good detective to be sure that you uncover all the telephone numbers that may be assigned to the various service personnel such as a psychologist, athletic departments, cafeteria, etc. These bills may be paid from departmental budgets and may not be reflected in the telephone numbers which are billed to the school district central office, but, in fact, are paid for by school districts' funds. Be sure that these are the most recent rates, and that any pending rate proposals are used in any comparison study forecasting a re-designing for a total system.

This billing computer printout will serve as inventory and should be verified by actual onsite visitations before completely agreed upon. Inventory of the telephone equipment will reveal the state of present capabilities. A composite view of the district-wide expenses should indicate the total monies now budgeted and spent. These monies can serve as a working base for funds available for redesigning total systems.

WHAT ARE MY NEEDS?

What should you consider when designing a communications system? How can you reduce the monthly telephone cost without diminishing services? Equally careful studies should be made of internal traffic, that is, internal within the educational system itself. After all, we are looking at a total telephone system. Internal school systems communications usually represent a large portion of the load on the total communications system. Studies I have been involved with so far have revealed that 50 to 60 percent of all telephoning in a school system is internal communications. In a traditional telephoning pattern, to establish an internal call would involve one business line outgoing and another business line incoming. In a total system set up, the two lines would be left free and this communication could take place on direct extensions, leased lines, or off-premise extension lines. By utilizing these facilities, the business line circuits would be left free to carry the burden of incoming and outgoing calls to the community. The cost of business lines usually ranges from four to five times the monthly charge of off-premise extension lease lines. Plus, it must be remembered that in a traditional pattern of establishing intercommunications you involve two of your business lines, so we are now looking at eight to ten times the cost on a monthly basis to establish this 50 to 60 percent of your internal communications.

The school district can provide more efficient service for intercommunications without the necessity of dialing seven digit numbers and involving two costly business lines. This is one means of reducing monthly telephone costs without diminishing service and, in many instances, may tend to increase the communications capabilities within a school system. Another factor in traditional phone patterns, from studies I have conducted, has indicated from five to fifteen percent of unaccountable long distance charges per monthly billing, no matter what administrative procedures have been set up to monitor the long distance usage. These calls are being placed without proper authorization. In a total communications system, features can be provided that will restrict the placing of long distance calls. The reaching of the long distance operator, and the reaching of area codes outside the local calling area must be handled through the district's telephone operator. Any telephone in a total system can be designed and restricted to function as an internal phone, only yet, still able to receive incoming public network calls, but barred from accessing dial tone to the communications network. This will dramatically reduce the monthly long distance charges that are incurred by unauthorized use and abuse of telephones provided in the school system.

HOW CAN YOU INCREASE EFFICIENCY WITHOUT INCREASING COST?

Traditional means of internal communications within a building take place by written memos with student messengers, single party line common talk circuit with selective ringing, internal classroom intercom phone systems, public address school sound systems with intercom or telephone hand sets; yet all of these are limited to only one conversation at one time and are non-private. Some school systems already recognized this deficiency and have installed PAX systems, Private Automatic Exchanges. This equipment solves this problem by providing automatic, private, rapid and multiple conversations; but lacks the capacity of interfacing with the public telephone network. By changing over to off-premise extensions or lease lines, at greatly reduced monthly cost, less than trunk line service. The redesign of a total telephone communications system with a centralized communications control center now allows telephone systems to be interconnected to paging systems, public address systems, or centralized school sound systems. With all communications functions including telephone communications centralized, you develop a total communications system.

HOW CAN COST BE MINIMIZED THROUGH THE USE OF LEASE LINES?

In many areas phone service is charged on message rate units. Proposed tariffs would have more areas come under this method of charging for each completed call. The more calls, the more the cost; the less calls, the less cost.

Internal calls can be transmitted on off-premise extensions in a total system. With internal calls within a school organization usually representing 50 to 60 percent of all calls placed, this traffic being carried on lease lines will not be subject to metering. Lease lines for off-premise use are billed on a fixed monthly rate regardless of the number of calls placed through them, and because of the large volume of internal calls in schools, the metered number of calls will be greatly reduced.

SHOULD YOU OWN OR LEASE TELEPHONE HARDWARE AND EQUIPMENT?

A decision should not be made until a careful study is made to determine which is more advantageous - to purchase telephone equipment outright, or to lease it from a public telephone company, or lease it from a private telephone contractor. Project costs out for a ten to fifteen year period; after all, this type of equipment remains in service for at least 20 to 30 years or longer. Look at how long your present equipment has been in service locally.

SUMMARY

Of all the desirable assets that a total telephone communications system can meet, with this expanded service and its many advantages, it will not necessarily require more phone instruments. In many cases, it has proven to provide less telephone instruments. However, it will still have more functional features and a multiplicity of uses which traditional patterns do not have, such as, hold, transfer, camp on, conference, off-premise extensions, ring back, paging, night bell service, surveillance, department groupings, extensions to limitedly used areas, night remote answering of incoming calls from any phone, voice paging, privacy, hold music, public address interconnection, and automatic night answering.

Once you have reached this point, you are now ready and in a position to call on outside consultants; they will be helpful for the designing of a system equipment that will serve as a vehicle to meet your needs. Be certain to get both the viewpoint from the public telephone communications specialist and a private telephone equipment consultant. Be sure to secure those who understand education. You can check the yellow pages of your directory under telephone business office. At this point, keep an open mind for these consultants to provide you with their recommendations and their suggestions for implementing your systems design. One pitfall to avoid at this point is the confusion that can be generated with the various technological terms and jargon dealing with various manufacturers and type of equipment available. Usually, with the public telephone company, you have very little option in deciding on the vintage of the type equipment that is being offered for your consideration. However, in the private sector, you have a greater expanse of variety available to you. Beware of many equipment manufacturers who are distributing and selling equipment that is of a design that represents engineering of 20 or 30 years ago. Even though this equipment is used by many utility companies presently, you should try to secure only that equipment that represents the very latest in technological design and advances. Very briefly, the historical telephone family lineage of development of switching equipment goes from the stroger type, step relay, reed relay or various combinations of these types. But the very latest of design should have, and will include, coded binary switching and solid state devices. (In translating these ideas into practice, let us review some of the things I have mentioned as they apply to actual situations.)

To bring about a unified approach to a total communications system, a district must first recognize its ever-increasing need for sophisticated communications systems. Built into any redesigned total communications system should be a total compatability with all present and future private intercom and paging systems. A total communications system should reflect an awareness of its effect on classroom communications capabilities and evolving teaching techniques. Whether or not a total communications system is established, the district must be aware of its relationship to its region and the region's programs as well as its relationship to the state.

If a district is seriously considering a commitment to a redesigned total communications system, it must be willing to commit itself to:

1. Identifying a local personnel capable of understanding and conducting such a study.

2. Providing the time and support to develop this study.

3. Allocating the resources and availability of all necessary information and records.

Once this information has been obtained, it must be analyzed, and a sound recommendation made to accomplish a total communications system. If this is not feasible, then the district should be willing to seek outside expertise to serve as consultants.

EDUCATIONAL COMMUNICATIONS AND THE TWO-YEAR COLLEGE: 27 ASPECTS OF THE STATE OF THE ART

by Dr. Milton Richards
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In the course of a recent five month sabbatical, I visited 30 colleges (27 of them two-year schools) in several southern and southwestern states. My remarks will deal chiefly with the two-year institutions, nearly all publicly supported.

I went to the colleges to try to learn at first hand something about the present state of what is variously referred to (as you know) as educational communications, instructional media, audio-visual technology, educational technology, and a number of similar things.

I'd like to tell you a little about what I saw and heard and, to some extent, what impressions I carried away with me. None of my comments are intended to be judgmental in any way.

I came to the colleges not as an expert in educational communications (which I am not), nor even as one with much experience in their use. Nor did I come to collect statistics or to conduct rigorous scientific research. I did not seek out preselected showcases for AV technology, but rather visited colleges of various sizes and ages, in urban, suburban and rural areas, as they happened to lie in my route of travel. You will note the wide variations in architecture--from the copy of the Alhambra, which is the University of Tampa, to a college in the heart of downtown Phoenix.*

I came as one curious to learn from administrators and ED COM people about matters that particularly interested me. I asked such questions as: Why do some teachers stubbornly resist using electronic and other aids to instruction? How do students react to media usage? How do administrators and AV people lead (or work with) faculty vis-a-vis educational communications? What are the philosophical and pedagogical principles on which the uses of instructional technology rest? How are those uses evaluated?

I'm not going to say very much about such things--important as they are--as budgets (everybody was looking for money), or facilities (they varied from closet-size workrooms to plush, lavishly appointed buildings), or equipment (frequently a jumble of unstandardized brands and types often determined by available service facilities), or personnel (AV directors seem to belong to an undiscipline, ranging from those with Master's or Doctoral degrees in communications or library science to transplanted former math or physics teachers), or chains of command (most of those who reported to Head Librarians appeared to be the least happy).

Only a small minority of teachers in each institution I visited used audio-visual devices, so let's take a look first at the factor of teacher resistance. According to a good many AV department heads and administrators (mostly academic deans), faculty resistance arises largely from feelings of insecurity. They spelled this out to mean that many teachers perceive electronic and other instructional devices as a threat to their jobs, that they fear a take-over of their classrooms by machines. Incidentally, all administrators and AV directors disavowed any intent to use educational communications for teacher replacement.

Here is a partial catalog of other attributed reasons for resistance:

- some teachers find it too much bother to adapt course content to mechanical devices, or to manipulate equipment, or to prepare software for self-instruction;

- teachers are often creatures of habit, unwilling to change traditional modes of instruction;

- mediated instruction is not viewed by some professors as teaching, expressed as a belief that a good teacher does not need the help of a machine. Or, as one respondent quoted an instructor, "When I shut my mouth, teaching stops";

* Slides accompanied this presentation.

- some teachers fear losing personal control over a class or personal contact with its members;

- and there is a conviction in some quarters that the use of technological devices is simply non-intellectual.

Audio visual personnel, in particular, had several perceptions of their own as to why resistance is persistent and widespread. Here are some of their observations:

- There are some tradition-rooted teachers who will never change their ways, come hell or high water;

- The current state of resistance is comparable to the reactions of many people to innovation throughout history: to the growth of air travel, the advent of motion pictures and the birth of television. In time, educational communications also will become accepted and established;

- The Administration often proclaims publicly its desire for, and support of, innovation in teaching, but does not do a proper job of selling the faculty on the need for innovation, or leading teachers in its implementation;

- There is a fairly widespread feeling among faculty, often rooted in evidence, that while the administration encourages and supports research and publication, it does not similarly appreciate or reward--psychically, financially, or thru reduced loads--faculty producers of AV software and programs, to say nothing of innovative users of instructional media;

- Few teachers are sufficiently organized and disciplined to take maximum advantage of instructional technology;

- Many teachers are crippled because they were never taught, formally or informally, the uses of educational media or the teaching and learning possibilities they offer. Schools of education were sometimes identified as bad teachers and users of AV technology. Most ED COM people freely admit their own share of guilt in the faulty communications between AV departments and faculty members.

- A few teachers are unwilling to risk putting on tape or film some slip of the tongue, some verbal indiscretion, that might jeopardize their positions, or open them to criticism as teachers before media audiences that might include administrators.

Administrators and AV people have fairly strong impressions about how students view instructional media. They say that students find AV more exciting than traditional teaching techniques, that by using media a teacher indicates that he "cares" more for his students than one who does not, that media make subject matter "more meaningful" to students, and that students are more responsive to a teacher with AV in his repertoire. A few AV men stressed the point that students, having been brought up on the slickness of commercial television and movies, react well only to AV content which is comparable in style, topicality and quality.

I also talked to a number of students about their attitudes toward educational communications and teachers who use them. To quote one student, "You can rap about Brave New World or 1984 all you want, but when you see them on the screen the impact is just so much greater." But another student told me that films, even good ones, become boring if they are shown very often. At one college, an AV director said that students--on their own--proselytize faculty to greater use of audio-visual techniques. On the whole, however, the students' responses indicated simply that they accept AV usage as routinely as they do textbooks or lectures or homework.

I asked administrators how they assessed the AV situation at their colleges--questions of role, utilization, the place of instructional technology in the future. Then I asked the media people--separately--the same questions. The differences in their answers were often significant. In brief, Deans and similar functionaires believe that AV devices are being used more widely, more frequently, and more effectively, than do AV personnel. I'm sure that the discrepant answers arose through differences in perception, not deliberate falsification. When it came to the future, however, administrators and AV directors shared similar dreams--about TV production facilities, independent study laboratories, increased staffs, preview rooms, larger and more sophisticated learning resource centers, and so on.

Looking ahead, many respondents see audio and video cassettes as the growth stock of the near future. Slides are favored, in part, because they are so "digestible." There is comparatively little use at present of rear projection and film loops, and little expressed interest in them for the future. 16mm motion pictures seem to be here to stay. Television gets mixed notices, with fewer being enthusiastic about it at present and for the future than I, for one, would have guessed. It is used in speech and theatre courses, in physical education departments and the like, but it is often misused, according to one AV man, as a "talking face." Most AV people feel that any relatively inexpensive methods that will help individualize instruction will be welcomed eagerly. One college, incidentally, has a sort of ombudsman--an administrator--who helps faculty get what they want.

Speaking of equipment, it was a question about dial access that seemed to arouse the most vigorous negative reactions at institutions without such a system. Here is a sampling of comment: dial access costs too much ("ferocious" was the word used); it is not functionally justifiable because of underuse; it "has had its day," as one put it, because it is impractical; dial access is "a waste of money...a tremendous public relations tool...and a hell of a toy for the kids"; it is limited in use, said one AV director, because the state of the art is not yet advanced to the point where programming and technical reliability are really very good; and, finally, it is inflexible, can't do anything a cassette can't do, and a cassette is portable.

The trend toward various forms of individualized instruction is much discussed, somewhat more so than practiced. But the interest is genuine and widespread, although one college found that self-study didn't work because it required more initiative than its students possessed. One dean I spoke to believes that individualized instruction via AV--when it finally flowers at his college--will cut attrition from its current 40% rate to ten percent. He admits he has no evidential basis for his belief; it was simply an article of faith.

I found that particularly interesting, because most of the people I talked to appeared to share, in varying degrees, this implicit faith that educational communications must help in the teaching and learning process--that the more sensory perceptions students were exposed to, the greater the learning effect.

But in every institution I visited, with one exception, I encountered almost no systematic, controlled or rigorous evaluation of the results of using instructional technology. Nor did I find any great enthusiasm expressed for measurement and evaluation, or plans being made for extensive analysis.

There were some movements in some schools in the general direction of measurement. In one institution, students are asked to write their reactions to the use of instructional media techniques. One such paper contains the passage, "movies relate things with a greater impact than teachers in a comparable time." In another college, I was told that the English department is in the middle of a two-year study of individualized instruction; so far the faculty is disappointed both in the degree of student usage, and the lack of improvement in grades.

Yet another college has students evaluate their teachers twice a year. Little difference has been noted in their attitudes toward teachers who do or do not use audio-visual devices.

I found only one college that has any meaningful record of measurement, and its findings indicate, not surprisingly, that mediated instruction can make a significant difference, with the classic qualifications--depending on the students' interest, the degree of involvement by the teachers, and the particular subject matter.

I'll try to sum up briefly my personal impressions. Like many others, I have felt over the past decade or so that educational communications might be the magical ingredient that would soon transform traditional modes of teaching. Or, to change the metaphor, I thought that instructional technology was trembling on the brink of a really significant, long overdue teaching revolution in higher education.

If I had now to express my feelings solely on the basis of my personal observations on sabbatical, I would say that I no longer feel that this sort of dramatic break from tradition is going to occur very soon, if at all, at the two-year college level.

Educational communications seem to me to be used as a toolbox for teachers, rather than as an integrated part of the instructional arsenal, with some tools being very handy and widely used--like overhead projectors and motion pictures--and others, like cassettes and television for individualized instruction--perhaps yet to come into their own.

Rarely did I obtain the impression that there is a widely shared, coherent rationale for the use of educational communications. In only a few colleges were educational communications regarded as part of a system of teaching. In only a few colleges did administrators state that they demanded of themselves and their teachers precisely detailed plans for using AV devices rooted in behavioral objectives and principles of learning.

The primary use of AV devices seems to be quite modular and sporadic--illustrations of particular materials or processes here and there, or a few movies that happened to come to the attention of the teacher--rather than meshed into a given course. So, it becomes a matter of some AV techniques being used by some faculty in some courses with some students for some varied purposes.

There were a few administrators I met who seemed to be striving mightily to lead teachers in the employment of educational communications in their institutions because they were convinced of their effectiveness.

One told me he works with faculty on questions such as these: What will particular technological devices do that traditional techniques won't? How will we be able to tell if the AV approach is as good as, or better, or worse than conventional methods? How much time do we give an experimental innovation to prove out before accepting or rejecting it?

There were schools at which administrators said they insist on detailed behavioral objectives for every course, then have the AV director analyze them and approach instructors with suggestions for the role of audio-visual techniques in a given course. In another school, the AV director spends a good deal of time asking teachers, "Where are your students having trouble?" and then trying to find ways to help instructors solve their problems. In still another college, the AV man regularly distributes case histories of successful usage elsewhere, as well as digests of news from AV publications.

In one college, the Professional Growth Committee has placed AV usage high on its list of ways one may develop as an instructor. A very few schools provide funds and/or released time for teachers who develop AV software. At two institutions, I was told that administrators hire only teachers who have had relatively extensive experience with mediated instruction and who feel a strong commitment to it. One college not only uses AV materials extensively, but produces and sells multi-media materials all over the country, and participating teachers get a share of the proceeds, in a financial or temporal way.

Some administrators spoke of the frustrations they encountered in trying to interest faculty members in mediated instruction.

- Some tried systematic in-service sessions on educational communications. Chronic low attendance nullified the effort;

- Some tried installing graduate credit courses in educational communications on campus, serviced by a neighboring four-year institution. Result: good attendance to obtain "easy credits," but little follow-through in faculty use of the technology.

- And a few tried exhortation or even the gun-to-the-head approach. Results: nil.

Assuming that the use of educational communications can make a significant difference in teaching and learning (and it is admittedly a challengeable assumption), I think I discerned four underlying reasons why they are not being employed as their proponents would like.

As I observed the situation in the two-year colleges, those reasons have to do with market demand, the role of audio-visual directors, the specificity of instructional objectives, and with institutional leadership.

On my visits, I was frequently reminded that the costs of technological devices can be horrendous, particularly when money is tight, as it is everywhere. But it is not money that seems to be the primary block, it is demand. As others have pointed out, the educational establishment is not going to put money into instructional aids as long as it does not recognize any great need for them. Right now, in many two-year colleges, it doesn't. And it is a marketing axiom that there is no significant demand for products to fill an unfelt need.

Moreover, institutional economics usually are dedicated to maintaining the status quo, as Richard Evans points out in his book Resistance to Innovation in Higher Education (p. 132). Even the infusion of governmental funds is no guarantee that educational technology will truly

be institutionalized in a college. "If channels within the system for the diffusion of innovations are non-existent," he writes (p. 133), "a very high probability exists that they will become accepted only at a very superficial level." That observation describes the situation in a good many of the colleges I visited.

The role of AV director is ambiguous in many colleges. On the one hand, many of them are trained to lead faculty in the best uses of educational communications. On the other hand, most of them seem to act as service people, either de facto, or by their own choice. Aside from their day to day support activities, I found most of their functions to consist of holding a brief orientation session for new faculty; having very occasional meetings with department heads and/or teachers; periodically circulating information about acquisitions of hard and software; and trying to figure out ways to lure faculty members (most of whom are in ignorance of AV facilities and methods) to their lairs so that they can do some evangelizing. Most AV men seem to depend on a personal, one-on-one approach--and they really don't have much time for that.

As for specifying instructional objectives, particularly in a behavioral mode, thru which the place of educational communications might be more clearly discerned, my impression is that far more lip service is paid to that concept than occurs in reality.

If there is no felt need overtly obvious for more educational communications, if the leadership role of the AV director is not being filled adequately, and if instructional objectives are hazy and obscure the possible contributions of instructional technology, where does that leave us? It leaves us, of course, with the fourth reason for the underemployment of educational media, the factor of institutional leadership.

That leadership is not notably evident, according to many of the AV people I interviewed. One AV director told me that a new president, a vigorous champion of educational technology, increased media usage 40% in his first year. But this kind of testimony was singularly rare. Most AV people described their presidents as not uncooperative, but not pioneering. Many stated or implied that the real leadership in mediated instruction, to the degree it existed, came from individual faculty members, with the administration more or less going along.

Here are some of the things I was told top administrators might do to help improve the situation.

- Demonstrate to the faculty the real values of educational innovation rather than merely the characteristics of various media. It is one thing--and a lesser one--to have the faculty's attention focused on a newly purchased cassette and slide unit. It is quite another thing--and a much more important one--to focus attention on the attitudinal, learning and motivational potentials inherent in educational communications.

- Demonstrate its deep interest in educational innovation in several ways; by working with faculty to identify existing deficiencies in teaching and learning; by supporting innovative improvements thru an R and D budget and/or teaching load adjustments for experimentation and innovation; by setting up clear channels for the diffusion of innovations, so that improvements in teaching techniques are not blind-alleyed among just a few adventurous instructors.

- Support an on-going group of so-called change agents to collect and present to the faculty, from time to time, evidence of successfully utilized educational communications in similar institutions.

- Make clear to the AV director and to the faculty what the AV man's leadership and support roles are to be. Instructors should be able to turn to the AV person and say, "Here are my course objectives; here's what I want students to be able to do as a result of taking this course; how can you help me?"

These, then, are some gleanings from my notes. Despite less than overwhelming evidence of vitality, I remain intrigued by the potential of educational communications; I assume that hard and software problems are surmountable; and I think that more and more instructors, given the proper leadership and institutional climate, will accept and use electronic and other aids to instruction.

There is one last and, I think fairly significant, point I'd like to mention.

In many of the colleges in the south and southwest, substantial segments of the student population have real trouble learning adequately via traditional methods. Poverty-stricken blacks in Mississippi, Mexican-Americans in Texas, Indians in remote sections of Arizona and New Mexico--these students have acute problems reading, speaking, and abstracting, and the need for individualized instruction and electronic learning aids is obvious. And this obvious need is a powerful motivation for innovation.

But in colleges with largely middle class white students, where deficiencies are not obvious; where traditional techniques are accepted as though fated; where there is no pressing need to think of change with all its fuss and bother and psychic wrenching--in such colleges administrative leadership is perhaps most needed to discern how the merely passable situation can be made better, and to enlist the faculty in the quest for improvement.

PSYCHIC TAPESTRY: MUSIC-MEDIA CONCERT

by Nancy Pulsifer and Evelyn Weir
Brunswick, Maine

NOW is the Only PLACE

The spring blew trumpets of color
Her green sang in my brain

I saw a blind man groping
"Tap-tap" with his cane;

I pitied him his blindness
But can I boast "I see"?

Perhaps there walks a spirit
Close by, who pities me.

A spirit who hears me tapping
The five-sensed cane of the mind.

Amid such unknown glories
I may be worse than blind.

PSYCHIC TAPESTRY represents
a Journey . . . . .

A journey through music,
imagery, and especially
the world of thought.

The word 'Psychic" has to do
with the mind.

And its deeper levels of
'awareness'.

The Tapestry is woven by
threads of thought,
giving it pattern.

Music and media provide the color.

PSYCHIC LAW creates the final form.

THE ROLE OF TELEVISION IN A MASTERS PROGRAM IN DANCE THERAPY

by Ruth Goldstein
Lynne McVeigh
Claire Schmais
Hunter College

The videotape you have just seen is a record of a mutual commitment between Hunter College's Experimental Program in Dance Therapy and Hunter's Educational Technology Center. We would like to share our impressions of more than a year's work in using television for teaching, training, and publicizing dance therapy. Dance therapists, or for that matter, any educational department can become overwhelmed by the thought of using television if they focus on the technical aspects of videotaping. But with sufficient pre-planning and rapport, members of the educational faculty and a television staff can combine their efforts to provide students with an enriching and exciting experience.

We are fortunate at Hunter College to have an experienced and committed television staff and an experimental Dance Therapy Masters Program that was partially funded by an N.I.M.H. grant. The television staff gave their time, their ability, and their experience. The grant provided funds for videotapes and the program provided eager students and interested instructors.

The initial reasons for using television were:

1. to help students in the dance therapy practicum see themselves and others and learn to absorb those images, visually and kinesthetically.

2. to provide a record of teaching techniques and student growth.

3. to produce a short edited tape for explaining the program to others.

We started this venture with pre-production conferences involving two members of the television staff* and the two co-teachers of the dance therapy practicum.** The television staff was given background information including mimeographed literature and explanation of the nature of the program. It was stressed that generally no visitors were allowed and that there was concern for the rights and the feelings of each group member. The primary focus was on the students' development and not on the videotaping.

The above considerations, plus the experience of the television staff in working in other situations with dancers, led to certain decisions. We would, in the first session,

1. videotape in the gym where the students had classes regularly, and where they would be most comfortable.

2. use the simplest setup: a small Sony camera with its built-in microphone on a tripod with casters, ½ inch videotape recorder, a 23" monitor which is easily seen by the entire class.

3. use the same camera angle for each student.

4. give no staging directions.

We also decided to videotape once a month and that the task taped would be based only on what the students were learning at that time. We wanted the students to welcome the camera and crew as friendly intruders, rather than hostile invaders and proceeded with that in mind.

* Lynne McVeigh and Ruth Goldstein
** Claire Schmais and Elissa White

The topic for the first shoot was "individual difference." Half the class at a time (8 students) moved in a circle. A leader was designated and she moved in her own way; the others followed. Each student had a turn. The crew experimented with different ways of shooting, sometimes involving total person, sometimes total group, some close-ups of face or the moving body part.

The circle and the size of the group presented a problem. The leader was often blocked out. After both groups were taped, they saw the playback and discussed their impressions.

The first taping accomplished its task:

1. Students could see and react to themselves.

2. They became familiar with the simplest form of the media.

3. Rapport was established between the students and the TV crew.

4. We had a visual record of the initial task.

The first evaluation was a crucial one. The dance therapy staff was surprised to find that videotape distorted some aspects of movement. Dynamics, in particular, did not come through fully, and we would have to adjust to the vicissitudes of the camera. This condition could not be altered, but some of the other problems could. We decided that we had to opt for some controlled spontaneity to accomplish our goals.

In order to capture both the individual and the group from the best angles, we decided to designate a spot on the floor for the leader. The group had to become somewhat aware of spacing so that the leader was not blocked out.

In order to capture the entire group, the camera should be placed at a high angle. The glare from white clothing was distracting; students were subsequently asked to wear neutral colors. Also, the gymnasium atmosphere was not conducive to quality taping because of bare floors, open windows, improper lighting, etc. The major decision after the first shooting was that the students seemed comfortable enough to go into the studio. In the studio, we could guarantee the quality of the tape. We decided to use a 1" videotape recorder so that we could edit more precisely.

Before the first studio taping, we asked the students to sign releases and explained the various educational purposes for which these tapes might be used.

The studio was set up in the following way. To cover the movement session, two floor cameras, one for close-up and one for wide angle of individuals and one remote camera for total group coverage, were placed at one end of the studio. For the first videotaping, we decided to concentrate on individual style. Therefore, we placed chalk marks on the studio floor to establish spacing and a spot for the leader of the group. The focus, then, of the cameras was on the leader, the person next to her, and the group. Three microphones were hung in one corner of the studio to cover the discussion that was to follow. However, after the movement session, the group sat down on the opposite side; the sensitive TV crew did not interfere, as the students were deeply involved in discussing their feelings that evolved from the movement. The loss of the discussion on tape was made up by the display of confidence and enthusiasm of the students to return to the studio.

Evaluating the first studio tape led to certain changes. We had tried to capture too much, the leader, the girl next to her and the group. It proved too confusing. Henceforth, we would focus primarily on the leader with only occasional shots of the group in order to show the relationship of the leader to the group, thereby guaranteeing no loss of any transitional movement.

The topic for the second studio taping was "warm-up" or "starting a session." Again, a spot was set for group discussion, and this time the teachers were asked to direct the students to this area. The decision to concentrate on the leader and the prearranged audio set up proved successful.

The topic for the third video session created new problems. We wished to show how a movement dialogue is developed between the leader and a member of the group. For this, we used a split screen. Floor spots for the leader and follower were established. In order to make the relation-

ship clear to the viewer, the camera first established the leader, then the follower, back to the leader and then to split screen. For the discussion, the camera crew found that close-ups were an absolute necessity to capture the intensity of the feelings. Medium shots, on the other hand, caused a lack of intimacy and did not convey the quality of the interaction among the students.

The discussion after this topic was lengthy, as well as intense, and we did not have time for any playback. This lack of time for playback occurred at several other sessions, and aside from missing a teaching opportunity, we found that it caused a lowering of trust.

One student was very uneasy about the edited tape that was going to be shown to their parents, friends, and husbands. She asked to see the edited version to make sure that she was not shown in an unfavorable and vulnerable state. She discovered on seeing it that her portion was very acceptable to her. It is interesting to note that the portion she assumed was on the edited tape had not been videotaped at all. Had the group seen the playbacks, this anxiety would have been avoided.

Our fourth topic, "developing empathy," was a continuation of the third, but we chose to crystalize the task by focusing just on the leader and follower and having the group as observers rather than participants. We asked the two students involved to stay in specific spots in order to get the best shots and lighting for the split screen. The specificity of the instructions engendered a certain hostility, and we therefore quickly decided to abandon the use of the split screen. The advantages would have been a focused study of two individuals. However, since the partners could both be seen on one screen and then alternately in close-up, this was not absolutely necessary. This session with two individuals separated from the group, being observed by the camera, the crew, and their peers, could not have occurred earlier. Confidence in the media and in their classmates was a necessary pre-requisite.

Throughout all the productions, the TV staff and the Dance Therapy staff met as often as they could. Judgments were continuously made by the entire staff as to what was best for the student, how best to enrich the practicum.

According to our original goals, we accomplished what we set out to do. We have a record to be used for training and research. We constantly add to a composite to show progress of the program to members of the college and the profession. In addition, we have used a medium that escalated the personal growth of the students and the teachers. We have a concrete tool to use to show other people what we are doing. The dance therapy practicum is essentially a private experience. Observers are not permitted in the classroom, but the tape is available for viewing, reviewing, and allowing for critical evaluation of teaching methodology.

In addition, faculty looks at the tapes again and again with and without outside consultants. They analyze their approach to specific problems. Vague feelings of uneasiness about a class can be brought into focus by analyzing the interaction. We can see some of the messages we missed and use that knowledge to improve future relationships.

Finally, one of the most rewarding and successful aspects of the relationship between the dance therapists and the TV staff is an ongoing process, a process where new problems and new solutions happen with every session. Words alone could not record the process in learning dance therapy. Verbal language transfers the meaning of movement into another symbolic system. Only through visual means could we effectively record and teach movement.

MAKE A SOUND

by Vincent Zappi and Otto Schmidt
Westchester Community College

Using the Media to encourage the use of the Media is demonstrated by this slide-sound package. Faculty produced materials using the media devices for the classroom are desirable and a responsibility of a Media Department in terms of encouragement and continuance. A "Sales Kit" of presentations should be maintained for opportune moments such as faculty meetings, seminars and the like. Actual production techniques can be shown within the total presentation to mirror the procedure and show the results during the initial program. In the quest for innovation and the acceptance of more sophisticated media, the relatively simple "bread and butter" media tend to be neglected.

As the man said, "The Media is the Message." This "Sound-Slide" presentation is being used in our Community College to encourage and inspire teachers to experiment with a packaged program of learning. Sound-Slide is perhaps the most accessible, convenient and flexible for immediate "feet wetting."

Appropriate music, supplementary sound effects and related narration give life to normally static slides which together can effectively convey a message, theme or concept to a class.

This particular presentation can be made available through our Department for purposes of demonstration, preview or analysis.

We will be pleased to answer any questions at our Educational Media Center.

"Make - A - Sound" - for the sake of increased teaching effectiveness.

CATALOGING EDUCATIONAL MEDIA

by Adelaide Slater
Floral Park, New York

PURPOSE OF PRESENTATION: To share some experiences of Central High School District #2.

Many schools are finding that their audiovisual media cannot be used to its full potential unless it is cataloged.

CHSD #2 BACKGROUND: A few details about CHSD #2 may suggest points of similarity to your situation:

It is a large district with more than 10,000 students. It also sponsors night school, summer school and various extended education projects.

There are six school buildings and nine libraries. Eventually all libraries will become multimedia centers. They are in varying stages now.

Central Instructional Materials Center - The District also has a large audiovisual collection, housed centrally. As school media centers develop, Central IMC will tend to concentrate on expensive or unusual materials. Central IMC material has always been listed in a book-type catalog by subject area, media form and title. Materials have also been cataloged on cards, essentially by accession number. This method works well centrally, but is not wholly adaptable to school media centers.

REASONS FOR CATALOGING AUDIOVISUAL MATERIALS IN THE MULTIMEDIA CENTERS:

Stated succinctly, cataloging saves time and money.
Cataloging frees the professional staff to work on ways to encourage greater, more perceptive use of media.

In addition, changes and innovations in education require quick adaptability. For example: Independent study has many interpretations but it always means more work for the media personnel.

METHOD OF DEVELOPING CHSD #2 PROCEDURES: New Hyde Park Memorial High School was our pilot school. The methods evolved have been in use since last spring. No appreciable changes have been necessary.

Procedures:
Investigated methods suggested in books.
Visited AV centers in schools, colleges, public libraries.
"Use tested" various ideas.

Comment: Books about cataloging usually over-simplify because the subject is really complex. Thus, they become misleading. For example, almost all show a phonograph record containing the work of one composer, but far more often, a record contains a variety of selections.

Canadian Library Association Standards:
These have been accepted as interim standards by the American Library Association. CHSD #3 methods are compatible.

The Canadian Association should be commended warmly for its difficult pioneer work. There are several reasons, however, why it seems inadvisable to accept the standards as final for some time yet because:

1. If they are accepted too soon, we will tend to force all future developments into a pre-determined mold.

2. As printed now, the standards do not accurately indicar the degree of flexibility and detail which the sponsors intended.

3. Terminology, particularly for describing the media form ("phonograph record," "filmstrip," etc.) needs research.

4. Location of media form identification needs more use-testing. The CLA suggested method of placing the media form in parenthesis after the title is questionable. Unless the user is carefully instructed, AV media will be confused with books.

5. Software itself needs much improvement, physically as well as in content.

6. Auxiliary tools, such as Granger's Index to Poetry, Play Index, etc., for books, do not exist for AV at present. If these should eventually be developed, they may affect cataloging needs.

AIMS OF CENTRAL HIGH SCHOOL DISTRICT #2 AV CATALOGING:

The basic aim is to aid the user.
All others may be subsumed under this. But the user has many needs. Therefore,

1. AV cataloging should be as close to book cataloging as practical so that the user does not have to cope with an additional method.

2. Cards should be easy to read.
If necessary, minor aspects of book catalog cards may be sacrificed.

3. Information on the main entry should be kept to one card if at all possible. "Follow" cards should be avoided but not at the expense of point 4.

4. AV cataloging usually will be more detailed than book cataloging because of the greater difficulty in handling AV materials. For example, it is time consuming to open a kit box to determine information about the filmstrips in it; a book may be examined far more easily. Every effort should be made to give the user an idea of the contents without the necessity for physically handling the material. (This is particularly important in some CHSD #2 schools where book and AV cards are interfiled in a catalog which is a long distance from the AV material.)

5. The catalog card should make it easy for those responsible for physical care of the AV materials to check the component parts. This is to save time when accounting for component parts and to reduce losses. (The amount of time needed for the physical care of AV materials is much greater than for books chiefly because the components become scattered.)

COLOR CODE: This is a question asked very frequently.

CHSD #2 uses color banded cards, partly because this conforms with Central IMC cataloging. The user must weigh for himself:

Advantages:

1. Psychological (Don't underestimate!)

2. Color differentiates AV materials from books.
(This can prevent much confusion and time waste.)

Disadvantages:

1. One quickly runs out of colors.
(However, even a single color for all AV might be considered.)

2. There is need for more card stock, greater supervision of typists, etc.

3. Color cannot be readily duplicated by photographic methods. Nor is color compatible with electronic computer and information retrieval methods as they exist at present.

4. Commercial cards do not use color.

COMMERCIAL CARDS: CHSD #2 has had to use mostly original cataloging to date because, in most cases, commercial cards did not exist.

Commercial cards vary. Most probably could be adjusted to CHSD #2 aims. The amount of adjusting and amplification needed, however, may be time consuming. One of the bigger problems will be the present lack of standard terminology. Commercial cards undoubtedly will improve.

* * *

The meeting continued with some CHSD #2 procedures which serve as general guidelines now. The cardinal principle underlying all procedures is: Cataloging is to aid the user. It is not intended to be an intellectual exercise.

* * *

A simplified listing of holdings, based on the AV card catalog, to distribute to teachers and administrators is a convenience and useful for public relations.

HERE COMES TOMORROW

by Jerrold E. Kemp
President, AECT

In actuality, the title of this presentation could more properly be TOMORROW IS ALREADY HERE.

In our field - educational communications and technology - many of the technological answers for tomorrow are available to us now. Excellent delivery systems for handling information of all kinds - from using wires and broadcasts to the portability of cassettes and cartridges - are either here or in near sight. Thus, there are numerous solutions for instructional problems, but in only a few instances have the problems they might solve been carefully identified. This has been a prime reason why our field has not been widely accepted as essential in education.

We and others have encouraged the use of media almost as ends unto themselves, and on this basis, they cannot do the job they really could perform. Educators frequently search for single, simple answers, and there have been many bandwagon movements for such things as television, language labs, programmed instruction, 8mm film, individualized instruction, and eventually for computer applications. Again, the resources have been selected before we knew what job should be done.

We so often try to make the technology fit the old patterns instead of devising new patterns around the capabilities of technology. This is what we must help our colleagues in education to do today. When properly employed, technology can change the goals of education and extend its capabilities in many directions.

Today three concerns are essential for change in education, and solutions for them are being sought for energetically. First, providing easy access for learning to everyone. The interest in alternatives to school, non-traditional programs, external degrees, and the open university concept all support this concern. Second, improving the quality of education on all levels. We speak of "maintaining excellence in education," but do we really have it in the first place? The drop-out rate, and the monotony of much instruction indicates that we have not reached the quality level. And third, the need to measure the effectiveness of instruction and learning in terms of productivity, accountability, and costs is becoming a real concern of educators, administrators, Boards, legislators, and others.

With regard to solutions for these three concerns, I strongly believe that technology's time has arrived, and we hold the potential for contributing solutions for many educational problems. The media specialist can and must become an integral member of the team working toward solutions.

Are we doing this now? Not in most situations. Many of us operate a "cafeteria" service... teachers come and help themselves without much professional guidance toward meaningful instructional solutions. We function on the "supply and service" levels - jobs that could be satisfactorily handled by clerks and technicians or by the graduates of our community college media personnel training programs. Yet many of us hold advanced degrees. Are you functioning as a real professional?

For many of us in the media field, the pattern shown in the accompanying diagram represents a sequence of development, starting at the bottom and working upward. We start by developing a facility, like a film library or a media center in a school, then, hopefully, move gradually to more sophisticated levels. Decisions on the selection of materials with teachers, providing professional-type in-service training, to helping teachers decide on the purposes, content, and techniques for expressing ideas with locally-produced materials, all indicate professional roles. On each level attention must be given to making decisions with teachers and administrators about the role of media in instruction...an intellectual activity, not a mechanical function.

Ultimately, I strongly believe that we must become active in the instructional design function shown at the top of the diagram, because the concept of instructional technology means more than machines and materials. It involves the objectives - strategies - evaluation decision-

making process. What is emerging, is a realization that method of planning for instruction is just as important as the content to be treated. This concern is just as essential in application for those of us working at lower levels of this listing as it is for those at the upper levels.

I urge you to get involved in working toward applying the instructional development concept for yourself so as to be prepared to assist your professional colleagues to using this process in solving many instructional problems. This, in brief terms, must be our emerging professional role.

To get others to recognize the premises I have stated above, we must show them successful examples of how technology serves the three concerns listed earlier. The positive results can bring greater recognition and support for our programs...which in turn can help to raise your own professional stature and the real contributions you can make to improved student learning.

Get with it...good luck!

MULTIMEDIA HARDWARE: AN INEXPENSIVE APPROACH

by A. C. Wagner
Wagner College
Staten Island, New York

(This approach, although designed around Kodak equipment, is adaptable to any type of projection equipment having remote control and access to lamp circuits through modification.)

The Kodak Carousel projectors (Ektagraphics and Standard Models) which are equipped for remote control have a versatile connector on their rear panel. Access is provided to the remote control of forward, reverse, focus, lamp, and power. (Diagram A)

A special "Projector Cord" (Part #188749 - List Price $7.00) comes with thirty-six inches of 9 conductor cable. The author uses a Cinch Jones eight pin connector for connecting to his control system. Other multi-pin connectors could be used. (Diagram B)

Any number of projectors can be remotely controlled from one location by duplicating the push-buttons, switches, fuses, and dimmer controls for each projector. The basic circuit is shown in Diagram C.

Power to Ektagraphic projectors are via a separate power cord. A receptacle controlled by a remote switch can provide on-off function from the controller. Power to Standard models is controlled via on-off switch on the controller in the "switched power" line. (Large black wire). A pilot on the controller indicates when a projector is turned "on." The projector switch is set in the FAN ON position...do not use the lamp on positions as dimmer will not operate.

The dimmer (any 600 watt electronic type) is inserted <u>in series</u> between the switch and the lamp. (In normal operation of the projector when the projector is switched to LAMP ON, a jumper is inserted across these two terminals by the switch.) The author recommends a five-ampere fuse in the <u>output</u> of the dimmer to protect the dimmer from short circuit damages. A pilot placed also in the <u>output</u> of the dimmer will indicate the relative brightness of the lamp under control. (Great for knowing which projector is on screen when changing slides.)

Push buttons between the low voltage common and the forward and reverse circuits provide remote control of these functions.

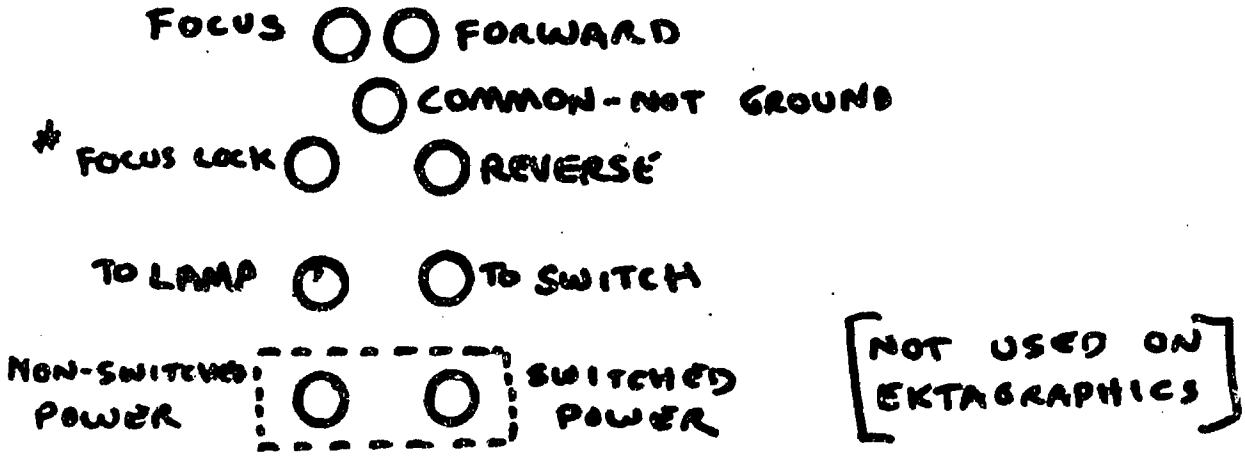
Equipment having remote focus capability can utilize the simple push buttons with diodes circuit shown in Diagram C. For auto-focus a more complex switching arrangement <u>and</u> one additional wire are necessary.

The lever control available from Times Square Theatrical Supply is superior to dial type control for controlling more than two projectors by one person. Where personnel are available the dial controls require rehearsed coordination.

HARDWARE

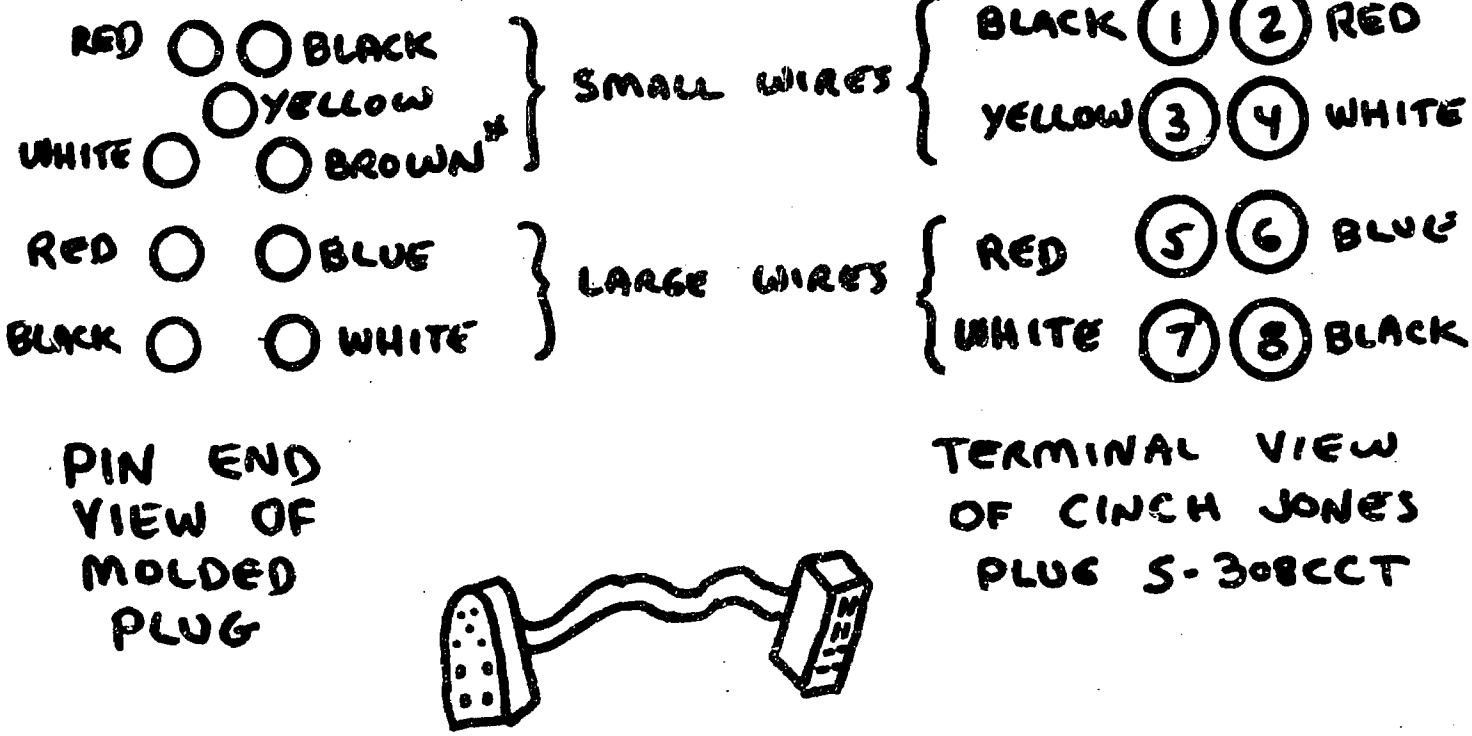
The lamp dimmer is the basic component of the multi-media controllers. Electronic dimmers (wall-box mounting) of 600 watts capacity serve as the control in the manual boards discussed in this presentation. These normally come with a dial type control which can be used for simple two projector controllers. For multi-projector controls the lever control is recommended. The only such control the author has found is described below.

REAR OF PROJECTOR "A"



PROJECTOR CORD #188749 "B"

(36")



PIN END VIEW OF MOLDED PLUG

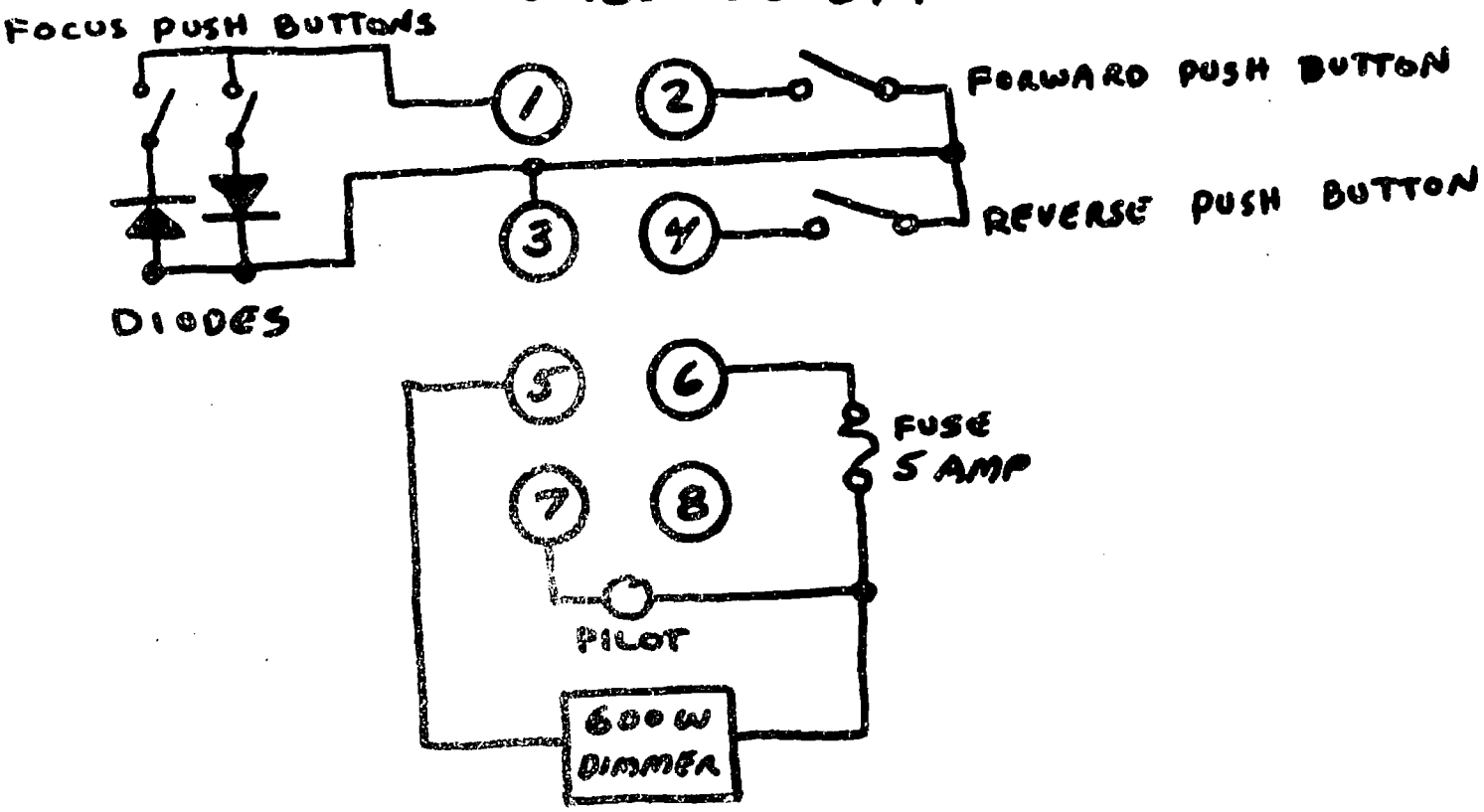
TERMINAL VIEW OF CINCH JONES PLUG S-308CCT

* AUTO-FOCUS PROJECTORS REQUIRE 10 PIN CONNECTORS & CABLE IF NOT EKTAGRAPHICS... WITH EKTAGRAPHICS USE ONE OF POWER PINS ON CINCH JONES #7 or 8.

CONTROLLER "C"

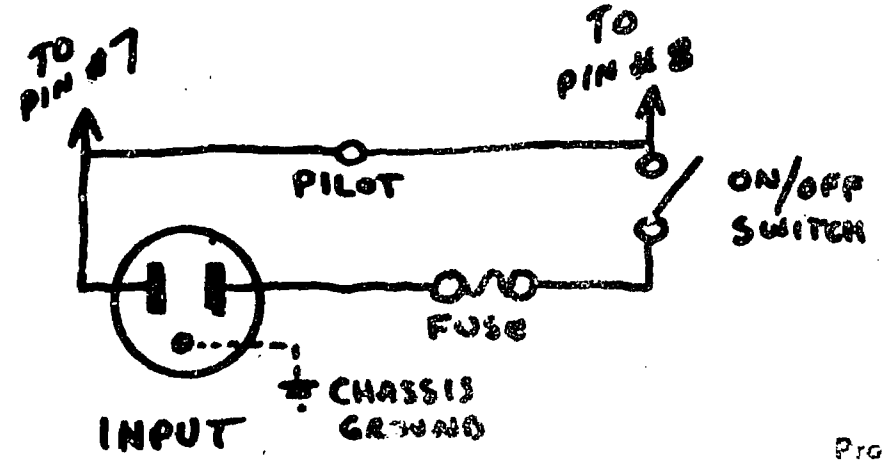
(ONE CIRCUIT SHOWN... ALL CIRCUITS SAME)

CINCH JONES - S308FP RECEPTACLE



PROJECTOR POWER

(NON EKTAGRAPHIC MODELS)



LAMP IS

NOT

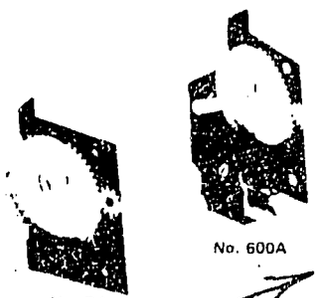
TURNED ON

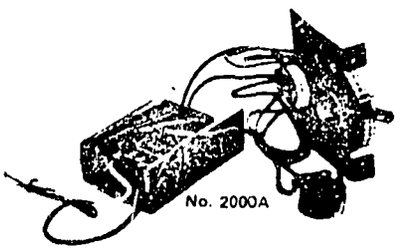
PROJECTOR OPERATES IN FAN POSITION

Professor A. C. Wagner, Director
Department of Audio Visual Services
Wagner College, Staten Island, N. Y. 10301

COMPONENT PARTS AND GEARS

Construct your own dimmer board with easy to assemble parts





No.	DESCRIPTION	Code	Price
600A	600 watt dimmer with mounting plate and gear assembly	BS	$14.75
1000A	1000 watt dimmer with mounting plate and gear assembly	BS	34.75
2000A	2000 watt dimmer with mounting plate and gear assembly	BS	44.75
GA	Gear only with mounting plate	95	4.75

ASK for EDUCATIONAL DISCOUNT

318 WEST 47th STREET
NEW YORK, N. Y. 10036
PHONE: (212) 245-4155

TIMES SQUARE THEATRICAL & STUDIO SUPPLY CORP.

Other recommended hardware items are listed below:

Projector Cord for Kodak Projectors - Molded plug with 36 inches of
9-wire cable attached...Part No. 188749 List Price $7.CO
Projector Receptacle for above...Part No. 185631 List Price $.50
5 Contact receptacle for remote controller...Part No. 166703 L.P. $.50
12 foot cord with 5 Contact plug...5 wire cord No. 185630 L.P. $2.50
Diodes-500mA 100 PIV) for focus control...No. 167822 L.P. $.75
Order from: Eastman Kodak Company, Central Parts Services
800 Lee Road, Rochester, N. Y. 14650

Cinch Jones P308CCT - Male connector... $.97
Cinch Jones S308FP - Female Chassis Connector... $.86
Cinch Jones S308CCT - Female connector... $1.04
Belden 8469 - 9 wire flexible cable $21.71 per 100 ft.
Cutler Hammer 844-2K4 Push buttons... $1.41
Switchcraft 1009 - 3 pole push button (advance 3 proj.) $2.24
Leecraft 32-2211 Pilot lamps neon... $1.08
Cutler Hammer 7582K6 On-off switches... $.75
Amphenol 160-2N Receptacles (accessories)... $1.10
Hubbel 5278 - input connector... $2.20
Littlefuse/Buss HKP holders for fuses... $.62

MULTI-MEDIA BIBLIOGRAPHY
write to:
Eastman Kodak Company, 343 State Street, Rochester, N. Y. 14650
Department 454

for Booklet "L-5" - "1972 Index to Kodak Information"

which lists prices and titles of all the following recommended pamphlets:

S-54 Cords-Plugs, and Receptacles for Kodak Slide and Movie Projectors

S-70-0-7 Kodak Slide Projector Wiring and Operation

S-51 Synchronizing Slide Changes in Multi-Image Presentations

S-58 Controlling Two or Three Projectors from a single Synchronizer

S-55 "Piggyback Stand" for Two Screen or Dissolve Projection

S-8 Producing Slides and Filmstrips

S-16 Kodak Projection Calculator

S-28 Wide-Screen and Multiple Screen Presentations

S-44 The Multi-Projector Control Center

S-48 Remote Control Systems for Kodak Projectors

S-57 Push-Button Start and Automatic Shut-off

S-70-0-2 Remote Control Box

U-915 A.V. Literature Packet

(The above list provides a basic library for Multi-Media hardware related to Kodak Carousels. The information is adaptable to other projectors.)

"Unique Lighting Handbook" $3.00 (#9100)	Edmund Scientific Co. 800 Edscorp Building Barrington, N. J. 08007
Wide Angle & Long Throw Lenses	Buhk Optical Company 1009 Beech Ave. Pittsburgh, Pa. 15233
Multi-Media Issue - "Theatre Crafts" Jan./Feb. 1970	Theatre Crafts 565 Fifth Ave. New York, N. Y. 10017
Screens & Intermedia Controls Multi-Media Controls	Polacoat Co. Spindler & Sauppe

MULTI-MEDIA PRESENTATIONS OF CHI-RHO COMPANY------BIOGRAPHICAL DATA
created by Al Wagner

Al Wagner is an Assistant Professor of Education and Director of the Department of Audio Visual Services at Wagner College, Staten Island, New York. He has his B.A. in Religion and Philosophy; his M.A. in Educational Theatre; and is working on his PhD in Communications at N.Y.U. He was the director of the Wagner College Chapel Players for six years and thirty productions and has been a stage manager and designer in summer stock, television, and off-Broadway. He was studio supervisor of WQED-TV, Pittsburgh's Educational Television station. He has written and directed a number of plays including "Parabolic Quartet," "Candle," "Bits & Pieces," "A Whale's Tale," "The Irrelevant Elephant," "Illustrations" and "Alice Goes to Church." He is Activities Director of Pinecrest Lutheran Leadership School, a week long camping experience for young people. He has taught Speech & Theatre courses but now teaches courses in Audio-Visual Techniques; Communications Theory; and Educational Television Workshop.

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contemporary songs.)

TESTING TIES TECHNOLOGY TO TEACHING

by Leslie M. Gibian
Ossining High School

The ideas that I plan to share with you today are not new. They are not original. They are unknown to most people; in fact, there is probably not one of you in this group that is not thoroughly familiar with the principles to be discussed. My objective then is to encourage more widespread use of techniques which put these principles into practice.

Dr. Karl Menninger is quoted as saying, "attitudes are more important than facts." What is the attitude of students in your schools toward audiovisual presentations? Do they consider them a basic tool for their learning benefit? Do they hold themselves responsible for absorbing and retaining the material presented? Or do they feel that the material in an audiovisual presentation is supplementary or enriching? Or perhaps they look upon such material as entertainment or a pleasant diversion from studies? Or do they instead consider such presentations boring and irrelevant? Have they been conditioned to look upon audiovisual presentations as baby-sitting devices?

How about the teachers in your school? Very often the attitude of students accurately reflects the attitude of their teachers.

I think most educators will agree that there is much material to be taught and that money and student time spent on audiovisual presentations should result in increased knowledge, skill, or understanding. A change in action or attitude can then be expected to result from this increase in knowledge, skill, or understanding.

Most activities are teacher-directed to the extent that the student knows ahead of time what is expected of him, what he will be held responsible for. This results in a high degree of student interest and involvement. In laboratory experiments, for example, the student is often expected to record his results when obtained and to discuss or report on them later. The activity is personalized. In a demonstration or teacher-led discussion, a high degree of student involvement is often secured.

How then can we secure this same degree or perhaps even a higher degree of student involvement in audiovisual presentations? I suggest we consider the device of testing. This testing can take place either during the presentation, after it, or both. Test questions can be short-answer or essay. The test can be long and involved or very short. Even a test consisting of two or three short-answer questions can be enough to secure intense student concentration on the presentation. Questions can be very simple or very sophisticated; they should be tailor-made to the audience.

For optimum results the student should be in possession of the test questions before the presentation -- at least a day before is best. Then he will know what to look for. Correction of the test by the teacher, or through discussion afterward, or both provides the necessary feedback. The teacher needs feedback to check on whether the student has absorbed the essentials of the material and the student requires feedback for the same reason.

As a lead-off into your participation in this activity, I would appreciate it if you would write your quick estimates in answer to the questions at the top of your papers:

Please estimate the number of teachers in your school or schools. _____

Please estimate the number who use testing techniques in conjunction with audiovisual resources. _____

Please estimate the number who supply students with test questions before a presentation. _____

Please estimate the number who preview new materials before showing. _____

And now you are asked to put yourself in the position of the student and write the answers to the questions during the film and slide programs.

(Each member of the audience was supplied with the test questions based on the film and slide programs.)

The following questions apply to the film shown:

1. What fruit is featured in the film?
2. What action is the viewer caused to take by the film?

Suggestions for a Sample Test

To get the benefit of the presentation, you have to take the position of a student. Please do:

1. Write the answers to the questions as you view.
2. Make additional notes in margins as you wish.

Estimate total number of teachers in your school or schools. _____

Estimate the number who use testing techniques in conjunction with audiovisual resources. _____

Estimate the number who supply students with test questions before a presentation. _____

Estimate the number who preview new materials before showing. _____

Sample Test on Movies Move People

According to the film:

1. On what do we spend most of our waking hours?
2. Which medium makes the most indelible impression on the mind?
3. Circle the abilities of this medium claimed by the narrator:
   imbed an idea or change one, occupy leisure time,
   babysit students, interrupt reality, distort time and space,
   stimulate the economy by encouraging spending of money,
   intercept senses -- lull and electrify them
4. The automobile sequence dramatizes the need for what product?
5. What point does the fire sequence emphasize?
6. What is the inscription on the bus sign?
7. In one or two words give your immediate emotional reaction at the end of the bus trip sequence.

The above seven questions merely serve to:

1. insure closer attention to the film
2. serve as an example of a written record of some points to which an instructor may want to refer at some later date.

These questions are not designed to emphasize the main points of the film. The teacher may want to set up a test to do this, but often it can be more effectively done during or after a second showing. The simple techniques of using or reshowing only part of a film or stopping a film temporarily to allow time for discussion should not be overlooked.

Sample Test on "Effective Visual Presentation"

According to the slide presentation:

Name four basic strengths that visuals add to communication.

1.

2.

3.

4.

Name four kinds of changes a presentation could create in a listener (or viewer).

1.

2.

3.

4.

Summarize the three suggested steps in organizing a presentation.

1.

2.

3.

The above questions exemplify the "informational record" type of involvement. The following characteristics might be noted:

A. The three questions focus attention on the three main points of this particular slide program.

B. The details are mentally observed by the person taking the test. This favors retention.

C. The test can be corrected or verified after the presentation by marking by an instructor, through discussion, or both.

D. The corrected test can be retained by the student as a record of the main points of the presentation with major details included.

Some suggestions about questions in general:

A. Supply questions in advance; a day before is best.

B. Questions can be short-answer or essay.

C. Essay questions can be answered after the test.

D. Test may consist of only two or three questions or it may be long and include many details.

E. Questions can be very simple or very sophisticated. They should be tailor-made to the audience.

Appreciation and credit is accorded to the Kodak Corporation for permission to use the film and slide programs.

IMCs BY THE BAKER'S DOZEN

by Edward Moy
Ithaca BOCES

The title for this presentation came from an NDEA Title III grant to the Ithaca City School District to establish thirteen elementary IMCs. The first grant was followed in successive years with two more grants, one for two junior high schools with 1,000 pupils each, and one for a large senior high school of 1,800 students. The latter was to set up IMCs by subject matter, rather than one large center for the entire school.

The presentation will concentrate on the elementary schools and the plan is to follow it next year with a presentation on the secondary schools. In the time now available, it will not be possible to go into great depth. Therefore, my main objective is to give you a brief overview of these thirteen centers with reference to a very extensive written study that was prepared as part of a Master's thesis by a Cornell student. For further information on this study, you should contact Mrs. Ann Gunning, K-12 Curriculum Director of the Ithaca City School District. This Master's study surveys in depth the reactions of teachers, students, parents and school principals.

Now to our presentation today, which is primarily a set of eighty 2 x 2" color slides with narration. The first ten slides are merely to show you what type of a community Ithaca is and its geographic layout. This is followed by a building by building overview of each school IMC. Ithaca is a typical small upstate city and, therefore, has both new and old schools. The newer schools were built with the IMC concept in mind. In these, the IMC is centrally located with ready access from most or all classrooms. In the older schools, various types of space have been utilized. In one school, an old gym has been remodeled, in another an auditorium has been remodeled, in a third, a former day-care center in the basement has been renovated, and in a fourth, two classrooms have had the wall between removed to make one large room. Finally, in other buildings two or more separate regular classrooms have been used. This obviously is the poorest arrangement of all. Unfortunately, the spaces available for a center in the older buildings are not always in the best locations for maximum utilization. On the other side of the coin, rooms such as gyms and auditoriums offer a lot more open space at a minimum cost per square foot.

One of the most important factors to consider when comparing these thirteen IMCs, is the fact that in this school district a system of autonomy has been in effect for several years. Therefore, each building principal was free to develop his building center as he saw fit. This has led to the development of IMCs with a great variety of staffing materials, equipment, and educational programs.

Staffing is a key item in the Center's operation; it varies from building to building. All have full-time library aides. Some have an experienced classroom teacher, others a part-time or full-time librarian, and others a paraprofessional or teacher aide. My observation would lead me to believe that the original and innovative programs come from good, experienced, creative classroom teachers, who have developed an interest and expertise in IMC operation.

A second factor which had an effect on the setting up and development of the IMCs, was a strong BOCES Educational Communications and Technology program which was capable of supporting the local school efforts. This Center provides consulting services, production services, in-service training for teachers and paraprofessionals, a full range of technical services, and a large, comprehensive materials library.

A third factor is that Ithaca operates a central processing and cataloging system that has aided in the circulation of materials.

Summary - If you wish to visit a rather large group of IMCs, you can find a good variety in the area served by the Tompkins-Seneca-Tioga BOCES (9 school districts, 40+ IMCs, K-12, including a SEIMC at the BOCES Center). For a written evaluation of the elementary IMCs, contact the Curriculum Director in Ithaca. It is safe to say that no two IMCs are alike; each has developed its own personality to fit the needs of its clientele.

THE NEW EDUCATIONAL DESIGN IN THE TOWN OF RYE

by Howard Rubin
Rye, New York

While many school districts in New York State have faced growth problems, each community, because of its uniqueness, has devised solutions to meet its own specific needs. Rye #5, known as Ridge Street, located in a corner of Westchester County on the Connecticut border, 20 miles from New York City, charted its own special solution to some unique problems.

The Ridge Street School District is one of the few districts in the area which did not have a high school of its own. The Ridge Street School is presently a one school district, serving 1055 pupils in grades Kindergarten through Nine in a large sprawling building. The predominately upper middle class community which it serves, is composed of many professional people with a large number of New York City commuters who have moved to the suburbs for many reasons...notably, good schools.

The major problem facing Ridge Street School District was the lack of a high school of its own. All 10th, 11th and 12th graders attended neighboring high schools on a tuition basis. This year, $515,000 has been appropriated for this expense...a substantial portion of the district budget.

Several years ago, the school board decided that the time had come to solve the tuition problem. The solution chosen appeared to be simple, but in fact was quite complex. The board instructed Harley Dingman, the District Principal, to prepare a plan which would culminate in the construction of a new high school for grades 7-12. And so we have the beginning of "the new design."

Building a school for grades 10, 11 and 12 which were not presently serviced by the district was an opportunity to begin from scratch. A physical plant could be constructed that would meet the specifications of any curriculum chosen. No past practices or worn traditions got in the way, since none existed. The goal was to design a facility which would be geared to a program rather than molding a curriculum to the limits of a physical plant.

To do this, the district received support from various sources. The John D. Rockefeller III Fund contributed $130,000 over a three year period to plan and implement a program using an interdisciplinary, humanities-arts approach for the 7th, 8th and 9th graders still in the Ridge Street School. Through this grant, Bud Moore, Curriculum Coordinator, created a program which would be a prototype for the new high school design.

This humanities oriented program, with an emphasis on the arts, established three teaching teams, one for each grade, 7 through 9. Each team consisted of an English teacher, a Social Studies teacher and a music and arts combination. Blocks of time were scheduled to allow the teaching team to organize their curriculum within a three period maleable block of time. This time could be and was used for traditional classes, large and small group workshops, minicourses, electives, full length films and anything else the team chose to schedule.

Activity centered units were planned and implemented by the teaching teams who were given planning time during the school day, and additional compensation for working during the summer to establish units based on a thorough understanding of course and unit objectives.

The Board of Education interviewed a number of architects who would be able to design a facility to meet the necessary criteria of the program.

The architect chosen, Leonard Salvador, of the firm Gibbons, Heidtman and Salvador met with members of the school faculty to study the functional relationships between the program and the necessary facility. His solution was a building without traditional classrooms.

Two major academic areas or lofts, as they are called, were designed. One, a humanities loft serving the English, Social Studies and arts, and the other a science-math loft. Both of

these areas would be without internal walls. In effect, they each would be one large acoustically treated room, promoting an interdisciplinary curriculum.

The building, originally designed for 1050 students, was finally cut down to house 750 pupils from grades 7-12.

Construction of the building is now in progress with the openi g date set for September 1972.

Some of the basic concepts of the humanities program at Ridge Street which will be implemented in the high school are illustrated here.

When students are involved in exciting learning activities, they will spread out, leave their desks and chairs, use space informally and imaginatively. They readily respond to open space when they have interesting things to do.

Humanities encourages students to be open and creative in music, graphics, performing arts, home economics, industrial arts, and many other activities.

Different types of activities call for flexible spaces, formal classes with teachers leading, small groups with 3 or 4 students, performance both formal and informal by professionals, and places for students to meet people and talk with them about the world.

"THE COUNTRY FARM"
A LANGUAGE EXPERIENCE UNIT

by Dorothy H. Alford
Sunset School
Utica, New York

Telly Spoons,

I c. be·re you to stand behind you and tell you something I know nothing about.

Next Thursday - which this week comes on Friday - there will be a mother's meeting for fathers only--

Wear your best clothes if you haven't any and if you can come, please stay at home Admission free - pay at the door. Take a seat and sit on the floor. It makes no difference where you sit - you'll fall in the floor cause your chair will split.

Thank you for your undecided attention----."

Good Afternoon - I'm Dorothy Alford - first-second grade teacher - Sunset Elementary School, Utica. I know that many of you recognize "Smart Aleck Oration" from the book, "Rocket in My Pocket." I re-introduce it to you not, I hope, as the level of coherence of this presentation, but as perhaps the most motivational piece of interest reading ever tape-recorded and presented to the first and second grade by me. I present it, too, as descriptive of my own feelings of ambivalence after I attended my first A.V. conference named "Teaching Machines" some years ago. At this meeting, I saw an instructor using a tape recorder - to present a lesson - she had eight small geniuses wired to her recorder with ear phones - at the same time, she was using an overhead projector to project her lesson sheet -- and on the side, another little genius was using the Language Master.

Up until this time, I hadn't even heard of most of this equipment - let alone being able to use it. Being definitely before A.V., both in age and training, I decided the best course was to hide in the coat closet until this blew over, as had other innovations in my experience. My own A.V. experience was limited to the record player on which I had a 70% proficiency--the filmstrip projector on which I had maybe a 50% proficiency. That is, I managed to get the filmstrip in front-side-to and right-side-up about half of the time.

Then there was that completely mysterious piece of gear, the 16mm Projector. You know the one? It has complete operating instructions printed on the inside of the removable door. Well, my first problem has always been to remove the removable door.

Well, I promise not to spend the next half hour telling you about my misadventures with that piece of gear.

But, if the A.V. Coordinator has ever been to your room and viewed the brand new film, "Your Friend, The Policeman," in three segments - one on the floor, one on the radiator, and the third one, irrevocably jammed in the projector. Well, you know what I mean. This all happened down South where I used to teach. I came North and was fortunate to obtain a position at Sunset Elementary School, Utica Public Schools.

Here, I encountered a program which I think can be best described as an all out assault on learning and teaching problems using audio-visual equipment and techniques. This program is under the direction and guidance of the current president of this association, Mr. Ted Henry, on the Utica District level, and Miss Madeleine Hunt, our principal, on the school level.

This program generates an entirely different attitude toward the use of equipment and toward the fumble-fingered teacher like me from attitudes I had encountered before. The equipment is to be used for the child - and in many cases, by the child - obviously, the child gets maximum use

from the equipment when the teacher is proficient in the operation of the gear, feels free to use it and even to experiment and try new ideas with it. During the implementation of this program, we were given several sessions where we actually operated the equipment. Probably, for me, the three most important factors in my change of attitude toward A.V. teaching and feeling at home with it were:

1. The cassette tape recorder which my children learned to operate even faster than I.

2. The fact that pieces of equipment were assigned for use in our individual classrooms rather than our having to share them with Mrs. Jones down the hall, or Mrs. Smith upstairs.

   And,

3. We were encouraged to take the equipment home and learn to use it in a relaxed home atmosphere. This was great for me as my husband read the manuals and taught me - as a result.

I became comfortable with the equipment and very excited about what I saw going on in my classroom and its potential, and now I endeavor to use one piece of equipment as a motivational or teaching device each day.

As a primary teacher all my years and primarily a teacher of reading, I reapplied myself to the perennial problem common to all of us: how to make reading more than a thirty minute isolated exercise, but to integrate it into the total classroom activity. Now I was viewing it as a problem to be solved at least in part, using my wonderful machines.

It happened at this time, I was emphasizing poetry and came upon the nonsense verse I quoted to you previously. I recorded the piece on the cassette and made a ditto paper for each child. First, I played the tape while the children listened and viewed the paper. Then, several of the second grade read parts of the verse while the first grade listened.

The next day, I began the tape again, but soon turned it off when I discovered that most of the children already knew it by heart. By popular request, we repeated it individually and in group until we ultimately gave it as a choral recitation in a play. Never once did I say to any child, "You memorize this," just the tape, the duplicated page, and the greatest motivation of all - interest in the material. Now, this really set me off on a supplemental reading program. Using first the filmstrip projector, we all watched and read primary fairy story strips together. Then I recorded the story on the cassette or used the commercially prepared pairs. The child used the viewer in conjunction with the cassette. Then the child read the story himself on the viewer alone. This was viewed by the children as a free time activity which was fun; but, actually, it is a programed reading lesson.

I began to think last year while I was teaching first grade, of a supplemental reading program in terms of language experience - having the child formulate a sentence from his own experience - the teacher writing the sentence on the board as he dictates it; then reading the sentence back to the child so that he sees the symbolic representation of his thinking, and having him read the sentence he has formulated and, depending on his performance level, having him write what he has written.

In using language experience, I came up with all sorts of uses for the equipment.

The adult tapes the child's story. The child tapes his own story, using the visual maker to photograph pictures which the child had drawn of the highlights of the story - taping suitable music for the story. Ultimately, using these slides, illustartions, and music to present a taped version of a play which evolved from the story.

One day, last spring, we were reading the usual Scott-Foresman and the doings of the ubiquitous Dick, Jane and Sally, when Serious Fred looked up at me, gave a sigh, and said, "I gettin' awful sick of Dick, Jane and Spot. Couldn't we read about somebody else?"

I thought to myself, "You just think you're getting tired of them! Suppose you had heard the same book three times a year for twenty years!" This, of course, is not to minimize the value of what I consider a very good reading program; but what Fred had said was true; we had progressed beyond the rather sterile activities of the above mentioned group! Now here was the golden opportunity, so I just hung my [illegible] right on Fred's suggestion and countered with, "Well, if you're sick of Dick, Jane and Sally, why don't we write our own book?" Thus was born "The Country Farm,"

an original story, a play growing from the story, art lessons, music, language lessons, reading lessons, vocabulary building, the child's evaluation of his and others' performances as he listens to himself on tape, social studies; all brought to realization using audio-visual equipment and materials.

After lunch on that same day, the reading group who had decided to improve on Dick and Jane, gathered in reading circle to discuss what kind of story they wanted to write. Frankly, I was a little apprehensive as my own experience in this type of activity was limited, and my student teacher was watching. First, we had to have a title. Somebody suggested "The Country Farm"; I think, because we had just visited a diary farm and my urban children saw farm life as an exotic setting. Quickly, we selected a large number of characters and animals who were not named Dick, Jane and Spot! I noticed that parents were named, but in the story achieved minor roles. At this point, we realized that the family must be presented with a problem, and the idea that they were very poor and had no food in the house was quickly elicited.

At this point, I believe the success of the story was determined. Somebody made a suggestion that seemed silly to somebody else. Mike said, "That's silly. This is a sad story. We can't have them doing silly things." The other reading class had written a funny story, so now we had to vote on whether the story was to be funny or serious.

The sentences already written on the board actually dictated that the story had to be serious, as there is nothing funny about being hungry. Now came the formation of the solution to the problem.

Because we had recently studied seeds and plants, somebody suggested that they plant seeds and grow their food. I remember that Serious Fred quickly and emphatically replied, "Seeds can't grow in one day!" -- a line which was later included in the story and in the play. A child suggested that they get some money. The teacher said, "How?" There was a rather lengthy silence. Then Jimmy, who seems to be about 3 feet tall in stature, but 10 feet tall in ideas said, "From the bank!" "From the bank!" Then the teacher said, "But you just can't go and get money from a bank." Jimmy said, "Let them take Tommy, the horse, to the bank." Mike said, "That's silly! Horses can't get money from the bank. They don't save money."

Jimmy now climbed into his reading chair amid derisive laughter, stood up in his chair and said, "No! You can get money for a horse, or a car, or a house! They give you money if you let them keep what you take!"

Up to now, I must admit, I, too, was mystified at the point Jimmy was trying to make when suddenly it dawned on me; Jimmy had the concept of collateral and was advancing what is a very sophisticated idea as to our solution.

We stopped then, and I explained that Jimmy was right and that they could get the horse back if they gave the bank man back his money and a little bit more money besides. The children then accepted Jimmy's idea with enthusiasm, and now we were really off and running.

The writing of the entire story took about seven days. Sentences were dictated. We read what we had written from the board and continued to formulate sentences. Each day, I would tape and ditto the sessions from the day before. I also made an experience chart of the accumulating sentences.

Please note the kinds of food purchased by the family at the grocery store. As we had done a unit on the 4 basic food groups, such foods were included.

It is interesting that in the minds of the children, the horse, having run away from the bank, was guilty of disobeying the law and was clearly threatened with jail.

When the bank's money was gone and the climax of the story arrived, we came up with two possible solutions, as the horse as collateral was obviously only the temporary or "buying time" solution.

The first solution advanced was that the seeds having been planted, the crops were now up and money obtained by the sale of the produce; thus, the family were thereafter able to run a profitable operation.

The second solution, and the one we ultimately voted as best, contained hidden treasure, maps, marauding Indians, trap doors, gold, diamonds, and untold wealth, the horse, home, and the purchase of several interesting items. It was interesting that the group seemed to divide into two distinct factions -- the group who advanced the realistic pedestrian solution, and the group who rejected this solution for the romantic exciting adventure. This group won the other group over as all fell under the spell of hidden treasure.

I was delighted with the content and the resolution of the problems presented by the story, and most of all, with the fact that my role quickly became that of recorder and maker of ditto sheets.

When the story was completed in booklet form, we all made covers for the book. The best cover was selected by the group. Our principal was invited in. We gave her the booklet with the best cover, then read the story to her.

Now, may I present to you, The Book, "The Country Farm," with 4 color duplicated pictures drawn by the children and a taped reading of the story by the entire class.

This year, I have the same children I had last year. In our class, we are all so fond of "The Country Farm," since it is our own story, that we decided to make the story into a play. First, the group who had written the story brought their booklets from home and re-read the story to us. We expanded the family and animals to include everybody in the class. At odd times during the day for about two weeks, we sat in one big group and talked the story into a play.

We used the method of creative drama to do our expansion.

"What would you say if you were Mother and your children were hungry?"

"What would you say if you were James and your favorite horse was taken away?"

"What do policemen say?"

"What would you say if you found gold?"

"How does Mr. Bankman act?"

At this time, I would like to show you some slides of the behind the scenes evolution of the story into the play.

Before presenting our play on tape and slides, I would like to suggest a few areas that might be of interest.

Please note the mixture of illustrations by members of the class and slides of the students photographed while the play was in production.

The illustrative slides were photographed by the machine called "The Visual Maker." The children had to use 8 inch x 8 inch paper and condense their picture ideas to this size.

The costumes for the play are very simple, and for the most part, class made.

Finally, notice, too, the characters in the play, how they emerge:

Mother - rather helpless.

Father - operating only with the help and guidance of his children.

The Police - rough, tough "Cop" types, straight out of TV.

Mr. Bankman - the kindly villain, and

James - who is really our own Jimmy of "take the horse to the bank" fame, who wrote himself right into the play.

And now - The First and Second Grades of Sunset School - present to you:

"THE COUNTRY FARM"
An Original Play

THE FILM EXCERPT AS A GROUP ENCOUNTER TOOL

by Henry A. Singer
Westport, Connecticut

A Human Encounter Film Session

CITY ACROSS THE RIVER

Life in a deteriorated area of drab, crowded housing and dubious business enterprises offer a youngster many contacts with criminal patterns. In a high delinquency area, these factors--unsatisfactory home life, unsolved emotional problems, and the influences of a deteriorated neighborhood--all work together to increase a child's contacts with criminal behavior. (1)

The film excerpt you are about to see deals with the interactions of teen-age boys in a slum district of a large city. It shows the destructive process of moving from pre-delinquent behavior to criminality. It points out the effects of inadequate housing, of the daily absence of working parents, of unwholesome environments, and of economic insecurity upon adolescent behavior. It further illustrates the exploitation of ethnic differences when two rival gangs compete for territory.

The treatment and prevention of crime producing conditions provides a basis for our group discussions and role playing following the film presentations.

SYNOPSIS

This is the story of Frank. He lives in the slum section of a large city. Both his parents work and he and his young sister must try and shift for themselves. When Frank takes his sister downtown for an outing she is overjoyed, but they return to the squalor of their noisy, smelly tenement home.

Frank belongs to a neighborhood gang which is given the job of beating up a restaurant owner who has not paid off a local racketeer. Frank and his buddies go to a vocational high school. In the shop many of the boys make "zip guns", which are homemade 22 caliber pistols. When the shop teacher catches one in process, he is threatened by a hostile class. The school bell saves the situation for him.

Frank becomes more involved with the gang. His father, returning from work one day, catches him being chased by a policeman for robbing telephone boxes. The father, realizing what the environment is doing to Frank, tells the mother that evening that they must move away immediately. The mother reminds the father of his dream to save enough money so one day they'll be able to move away and open a country store. The father tells her that dreams can be buried:...the living child must be saved.

Frank becomes more aggressive and when the gang goes to its pool parlor and discovers some Puerto Rican boys of a rival gang, he sails in to help beat them up.

Returning to school after an authorized absence, Frank and a buddy cause a riot in the classroom by heckling the teacher. The teacher, unable to handle the class, runs to fetch the principal. The principal suspends the class. He consoles the teacher who feels only an atomic bomb on the slums will save the boys.

ANALYSIS

1. Emotional Insecurity

As young children grow up, they have an increasing need for a feeling of belonging. They need the emotional security of feeling that they have a stake in this world and belong to a group that has concern for their

welfare. In most cases this group is the family. But when the family, as is often necessary among the economically insecure, has its members all engaged in separate activities which are necessary for them to survive, young people are not always able to fulfill this need for belonging. They must find a substitute. As we see in this excerpt, that substitute is often the gang. The gang belongingness may often be channeled into a constructive outlet. However, in the case of young people growing up in the slum districts of our cities it seems as if the environment often channels them into delinquent directions. Why this is and what can be done about it is the basis for discussion and the application of this excerpt.

As children grow up, they have a tremendous need and capacity for love and affection. When both parents are actively engaged in full time employment, it is not always possible for this need to be satisfied. In this excerpt we see a brother and sister supplying each other's need for love and affection, and belonging. For the short hours that Frank takes his sister to see the sights in the big town you see the tremendous thrill that they share in the experience. Unfortunately, they are robbed of much of this when they return to the squalor of the tenement.

While children are growing up, they do things and behave in ways which call for tremendous amounts of understanding. They themselves are curious to understand the world in which they live and as they acquire information or as they are frustrated in the pursuit of this understanding, it is reflected in their behavior.

As young people mature, they want to have the feelings of accomplishment and they are constantly seeking opportunity to demonstrate achievement and to be recognized. The showing off behavior that is often observed in the young boys is an overt appeal to be recognized. When Frank tries to be more aggressive than the others in the fight with the Puerto Rican, he is seeking the recognition of his friends.

2. Economic Insecurity

Children growing up in underprivileged areas soon become aware that much of life is conducted on material levels. They see parents working too hard and their own sense of values is sorely tested in the process.

We all need decent housing which is free from squalor, dirt and unpleasant associations. Slum housing leaves disturbing impressions on children.

Healthy, curious youngsters need outlets for their energies during the surging period of growth in adolescence. There is need for adequate recreation facilities and understanding supervision if they are to be given opportunities for healthy constructive growth.

3. Interpersonal Relations

The problems of teachers in the slums or undesirable districts of the cities are tremendous. Many of the teachers come from backgrounds much different than the ones in which they have to teach. Or often, when they come from the same backgrounds, they no longer care to identify themselves with these problems. How is a teacher in an underprivileged area to handle many of the pre-delinquents or delinquents that are in his class?

We see in this excerpt a teacher who seems to be completely impervious to the needs and problems of the boys in his class. We see him very meticulously drawing a mechanical diagram while the people in the shop class are busily making "zip guns". The teacher shows his inability to cope with the situation when they threaten him menacingly as he discovers the "zip gun" activities. Again, in handling the situation, when Frank and his friend return after playing hookey, he continues to meet aggression with aggression which results in the class becoming completely out of hand. He must resort to the authority of the principal to restore order. We see this order resulting in further disciplinary action.

As we see a teacher in his relations with the pupils, how he speaks, how he behaves, how he acts, how he accepts or rejects them, we begin to see the character, personality and values of this individual. We begin to get an index into the kind of person an individual is by the way he treats others, the way he behaves toward them. In this excerpt we see the very critical and delicate inter-personal relations between a teacher and boys who are very troubled.

Some other problems in human relations raised by the film:

1. "The question of controlling the economic insecurities that contribute so heavily to the disorganization of many homes is a question not only of techniques, some of which have not yet been invented, but of fundamental conflicts in life philosophies themselves...The problem confronting every community is how to mitigate the pressures of economic inequality upon the children[2]". What are some of the ways we can improve conditions under which children in underprivileged areas grow?

2. Halliday[3] speaks of delinquency as a defense against the environment and that defiance and rebellion are symptomatic of this defensive behavior. What are some of the reasons for young people developing this rebellion which so often takes the form of delinquency? What are some of the ways in which they manifest this defiance in their behavior?

3. Young boys identify with heroes. In this excerpt, all the boys would like to be like Gaggsy, the local racketeer. He has a flashy convertible, a flashy girl friend, is a polished and smooth dresser but more than these, he wields power. How can we show children different value when the blatant successes seem so much more real? When local governments condone and even encourage local racketeers, how will the teacher show the practicality of intrinsic values?

4. The teacher in the first classroom sequence seemed deeply engrossed in a mechanical drawing while the class was making individual items including "zip guns". What are some other ways a teacher might relate himself to the youngsters?

5. Frank seemed like a youth with many promising qualities. He took his sister on an outing with his five dollar birthday present. He put his arm around her while they were walking. When the gang went to beat up a man he held back as if not wanting to participate in violence. Later he became more and more aggressive, hostile and eventually delinquent. What can we do to save the youths like Frank who might well contribute to society if given the chance?

6. "It may seem a striking statement, but it is nevertheless perfectly true that no case ever appeared...in a juvenile court in which the act committed was not prompted wholly or in part by some impulse which under other relations and other associations could not but be both right and desirable."[4] In light of this statement and having viewed the excerpt, what are some of the ways young people in our underprivileged areas, may be channelled into constructive outlets?

7. We saw glimpses in the excerpt of problems of family living in this slum area. What are some of the factors in family relationships under these circumstances which contribute to the personalities of young people?

8. The gang of which Frank was a member saw some Puerto Rican boys in a pool room. They went in to beat up the "spicks", as they called them. How do we account for the special hostility against minority groups in these areas?

9. The principal told the teacher that he had to be firm with the boys. The teacher said he could only reason with them. In education what are some of the ways we reason with youngsters and what are some of the ways we are firm?

10. The teacher feels only an atomic bomb can solve the problem of the gang and the environment. What are some other ways?

SUMMARY

The Police Commissioner of New York, Patrick Murphy, has said that, "most of the crime breeding depressants of the human spirit--sickness, poverty, idleness, inadequate housing and poor education--are found in the citys' ghettos and slums. In the slums we have reached the point of no return". (5)

Although housing is not the "cause" of delinquency, every study yet made shows a striking association between substandard housing and delinquency rates. There is also considerable evidence that when slum people are moved into adequate housing, delinquency rates decline. (6)

Most arrests for felonies against property in the U.S. are of persons under eighteen, charged with theft or burglary, usually in groups of two or more associates. Their crime expresses

deviation from the prescribed pattern of socialization in a culture, whereby children prepare in school for self-sufficiency as adults...crime is one way of perceiving oneself as an independent and self sufficient adult, so it is especially attractive to adolescents who find schooling unrewarding or for other reasons are in conflict with adults. (7)

The unruliness of young people, widespread drug addiction, the existence of much poverty in a wealthy society, the pursuit of the dollar by any available means are phenomena the police, the courts, and the correctional apparatus, which must deal with crimes and criminals one by one, cannot confront directly. They are strands that can be disentangled from the fabric of American life only by the concerted action to change the general conditions and attitudes that are associated with crime, no improvement in law enforcement and administration of justice, will be of much avail. (8)

We see young people growing up in the depressed areas of our cities under many handicaps. Poor and inadequate housing, unwholesome influences, financial limitations, to name a few that touches many. Although we have made great strides in many areas of urban society, the growth has been uneven and in some cases distorted. More real education for survival appears to take place in the street than in our classrooms. Members of minority groups who are mostly concentrated in our slums, feel trapped. The young especially feel bitter and see little chance to escape. Changes are beginning to take place and minority groups have become more assertive. Recent conflicts between teacher's organizations and community groups have pointed up these challenges.

In the schools, teachers and administrators sometimes have an indifferent attitude towards young people from different cultural or socio-economic backgrounds. In the face of many of their own pressures, educators project their own frustrations by placing all the blame on the environment. Not enough effort is made to help the victims trapped in this environment. Parents too, are looking for scapeboats, the educators and local officials are all vulnerable. (9)

Perhaps we need to view delinquency and crime as the result of what we ourselves teach and do to our children. The development of the concept of individual responsibility was a great achievement in its time, but today we can and must go on to a newer concept of cultural responsibility... perhaps in light of the ecological crisis, we may need to go on to universally shared responsibilities. We will finally be judged as a society by how we treat our individuals. Moreover, we cannot expect individual moral responsibility unless we foster personalities capable of being responsible and of using freedom wisely. (10)

FOOTNOTES

(1) Sheldon and Eleanor Glueck, Predicting Juvenile Delinquency and Crime, (Cambridge, Mass. Harvard University Press, 1959) pp.18-25.
[2]L. J. Carr, Delinquency Control, New York Harpers, 1939, p. 217.
[3]J. Halliday, Psycho-social Medicine, New York, Norton, 1949, p. 104.
[4]G. D. Butler, Community Recreation, New York, McGraw-Hill, 1940, p. 81.
[5]Patrick V. Murphy, "Social Change and the Police", American Scholar, Vol. 40, No. 4, Autumn, 1971, pp. 687.
[6]P. Horton & G. Leslie, The Sociology of Social Problems, Appleton-Century-Crofts, N. Y., [7]1965, pp. 181.
[7]Daniel Glaser, Social Deviance, N. Y. Markham, 1971.
[8]L. Stewart & W. Clarke, Priorities for the 70's--CRIME, N. Y., John Day, 1971 pp. 50.
[9]Henry Singer, Training a City in Sensitivity, Training & Development Journal, Vol. 26, No. 5, May, 1972, pp. 20-24.
[10]L. K. Frank, Personality and Culture, N.Y. Hinds, Hayden & Eldredge, 1948, pp. 15.

CRIME PREVENTION CLINIC

Depending on the size of the audience, we will break up into sets of four teams with ten or twelve participants on each. The teams will meet for 30 minutes. A person should be designated as a reporter who will summarize the teams session for a plenary meeting.

Team A - Half will take the part of Spanish parents and the other half will be non-Spanish parents of the boys in the gangs.

Team B - Half will serve as parents of the boys in the gang and half as Police Youth Officers.

Team C - Teachers and administrators will make up one half of the group and the parents the other.

Team D - Concerned parents and lawyers from the City at large.

Teams A, B, and C will base their sessions on the issues raised directly in the film. Team D will deal with the overall problems of crime prevention as it effects the City as well.

You may want to raise some of the questions listed in the items on page four of this paper. Perhaps some members of the group may contribute ideas for recommended solutions to the more pressing issues raised by the film.

CITY ACROSS THE RIVER

UNIVERSAL--INTERNATIONAL

An Excerpt of the New York University Center for Research

16mm--Sound--Two Reels--18 Minutes

Produced and Excerpted by Henry A. Singer

Edited by Ralph Rosenblum

INSTRUCTIONAL TECHNOLOGY

by Gordon M. Ambach
Executive Deputy Commissioner
New York State Education Department

(On Video Tape)

Mr. Chairman, and Members of the New York State Educational Communications Association. It is my great pleasure this evening to join you in thinking about instructional technology. As I have planned with my colleagues from the Department for this presentation, the following thoughts have been in mind. The most effective education takes place when the educator provides a model. Our subject this evening is instructional technology. If we are learning about it, we had better use it. You are all familiar with the slang expression of "putting your money where your mouth is." Let me transpose that by saying that we are "putting our money where our tube is."

I have had superb assistance from colleagues in the Department in preparing for you tonight. I never thought they would can me like this, but they have, and I am now appearing before you as the result of so many electronic impulses on a plastic tape.

I am advised that many of you in schools, BOCES, and universities are equipped to tape off-air broadcasts using automatic time control systems. For you we arranged with the New York Television Network, to transmit my address at 1:00 a.m., November 14, so that all public television stations in the State may transmit to you at that time. In addition to public stations on Long Island and in New York City, Albany, Syracuse, Binghamton, Rochester, Buffalo and Watertown, BOCES TV Translator networks in Delaware, Green, Schoharie and Otsego counties and in Cattaraugus County will also carry the address. The address is 29 minutes and 30 seconds in length so that a standard 30 minute tape length in any format will be sufficient. The telecast will be in color.

For those of you who do not have the automatic taping devices, copies of the address may be obtained from any one of the 12 BOCES tape duplication centers throughout the State or through the Education Department's Media Materials Distribution Service.

I know that there are many who would prefer to have the information in readable format. We have, therefore, arranged for microfische copies of the address prepared for rapid access through EPSIS. Please stop at the EPSIS booth in the exhibit area in the hotel.

Hard copies of my message may be obtained within ten minutes by calling this special number to access our telecopies network.

I would be very much interested in your comments and suggestions regarding my message to you. A special computer response questionnaire will be available outside this room. For those of you who are now accessed to the NYSES Computers network, we encourage you to transmit your responses so that we may make a thorough analysis of your comments which will provide us with valuable data for development of further policy on instructional technology. Please transmit your response before December 1.

I realize that some of you would prefer to respond or comment in a more informal way. We invite you to use our automatic response system for this purpose. If you will simply call any of the following numbers, day or night, your comments will be recorded and reviewed. Please give your name and address so that I may respond to any questions you may have.

I believe that covers all facilities. Thank you and good evening. (Black out - at podium - lights up).

(Live)

Before you disappear, let me join you in person. The message I just presented through the close circuit system was fictional. There will be no information or response accessing as I described. Admittedly, we have "put you on" a bit, but it is a "put on" with a purpose. The

purpose of this opener was to dramatize the very real possibilities of technology that now exist and which will sooner than later affect all of us.

This was a 25th birthday party "put on." I bring you greetings and congratulations from the Commissioner and I bring my own greetings to you, your President, Ted Henry, and your President-Elect, Dick Hubbard. I know this is your largest convocation ever in all respects.

Think for a moment about that opening clip, this record-breaking conference and other conferences. The problem of housing conference attendees and exhibitors grows yearly as the conference expands. The logistic and economic problems of attending the conference also become greater each year. Time and money are not always available for those who could profit from the exchange of professional information available here. Time for speakers and resource specialists who could contribute to the success of the conference by coming here is also diminishing. And most important of all, perhaps the message is not needed here but back home for those other than the experts and the committed who come to Grossinger's.

It is no longer absurdly futuristic to project a time in the near future when the techniques we just referred to may be more practical to employ than having us all assemble here in person. In addition, the impact of the message may be greater.

My topic this evening is State policy for instructional technology. As you can see, I am just as much interested in demonstrating it, as talking about it.

Although we do not have my comments in all the forms suggested on the tape, I have some hard copy for you to receive at the close of this evening session. Tomorrow morning the Regents position paper on Instructional Technology will be released. The coincidence of the release and your conference is no accident. I am pleased to have copies of that paper here tonight. Let me tell you a bit about the paper.

In the foreword to the paper, Commissioner Nyquist writes:

> "The contributions of technology to the achievements of mankind in space exploration, communications, transportation, medicine, and industrial and agricultural production are widely acknowledged. Although some argue that the technological revolution may be producing harmful side effects, such as dehumanization and environmental abuse, it is difficult to imagine how the world's burgeoning population could sustain itself without major reliance on various applications of technology. Trends in population growth and urbanization make continuing development of technology a necessity for maintenance of reasonable living standards and even survival. It is perhaps a paradox that the intellects and skills of those responsible for the great accomplishments in the field of technology have been developed in an education system which is little touched by technology.
>
> Today the education system that has produced the individual skills and talents that have made American technology first in the world is itself troubled. The changing characteristics of society, the rising expectations of greater abundance and security and the realization that only through education can these expectations be achieved, have created a dilemma of major proportions. The Regents are convinced that, with the help of technology, education of improved quality can be more economically produced to meet the demand."

The paper describes instructional technology as "a planned system which provides a broad range of electro-mechanical means of telecommunications, computer systems, and other devices coupled with the activities of students and teachers to achieve specific educational objectives."

Specific objectives in the use of instructional technology are stated -- individualized instruction, cost effectiveness, use at all learning levels, special potential for disadvantaged students with reading troubles, and special use in occupational training at all levels.

The paper indicates strengths of instructional technology--it is attractive and familiar, overcomes isolation, offers efficient access and distribution, and can draw on great experience and knowledge developed, particularly in the commercial areas. Weaknesses are also noted. Special stress is placed on software needs, the limited spread or dissemination of proved systems, resistance to change existing school patterns, and the problem of matching the right technology to the right educational problem.

The Regents recommend increased support of research, development and dissemination of technologies; a review of the certification needs for instructional technologists; and development of new strategies for closer cooperation among educational institutions, business and industry and government in improving the quality and quantity and reducing the cost of materials.

They conclude with the statement that instructional technology is an essential part of the State's educational program and that New York should provide a system which is preeminent in the nation.

That is a brief overview. I hope you will read the entire paper with great care. Copies can be found at the EPSIS booth on the upper balcony ramp in the lobby.

As you probably know, the recent report of the Fleischmann Commission is in close harmony with the Regents' position on this subject. The Commission Report recommends that, "the State should financially support the introduction of instructional television and other technological aids in local schools."

It continues: "We propose that the State gradually begin to equip all schools with facilities for cable or instructional television. Each school would then provide two hours of television instruction per student each day. We do not claim that students can be taught by television alone, nor do we think that instructional television is superior to the efforts of a competent teacher, but it does seem clear that the use of television allows a dramatic enlargement of class size for particular topics of instruction. Hence, the use of instructional television would free some teachers to work with small groups of students in situations where that form of instruction is appropriate."

The Report continues: "...The State should not wait for the Federal Government to act before taking the lead in insuring that these innovations are adopted and used intelligently and logically."

These are not new thoughts for you. You are all familiar with the exhortations to use more instructional technology. Why hasn't this happened? What can be done to speed adoption?

In its recent report -- The Fourth Revolution in Instructional Technology -- the Carnegie Commission on Higher Education states that the most significant advances in the coming decade in instructional technology will be generated by the emerging institutions and the extramural educational systems that are being created alongside traditional ones. The Report argues that by the year 2000, traditional institutions will be employing the new technologies for 20% of their instruction, whereas extramural education may be employing the new technologies for 80% of their instruction. It adds that it is the extramural educational institutions which offer the most hope for the improvement of education. It lists the characteristics of these alternative systems. They are not tradition-bound; they must develop materials that are largely self-instructional; they are mass oriented, drawing their students from an extremely wide spectrum of society and they will serve potentially great numbers. Their students may be located at a considerable distance from their base of operations and from each other.

I believe that the Carnegie Report must be proved wrong with regard to the use of technology in existing institutions. I believe we can summon the wisdom and the support to advance the use of instructional technology in the schools and not just in alternative educational structures.

I submit that we do this not by oration but by a demonstration of the capability of technology to solve certain educational problems in our educational institutions and the development of means to put it in practice. Let me give some examples.

Can we demonstrate that technology achieves educational purposes?

(1) Here's an example of teaching clerical or manual skills. This past summer, Station WNED-TV, Buffalo, in cooperation with local school districts and the State Education Department, offered a typing course by TV. The project was a first in that school system's organized summer school schedule to give high school credit for a course delivered by a television station. The course provided students or adults the opportunity to learn typing at home and receive a half hour of high school credit. A student manual and guide book was available. Phone inquiries were possible after each daily broadcast.

After ten hours of TV instruction, nearly 80% of the student viewers who took the typing examination passed and received school credit.

Based on the number of guides purchased through WNED-TV, a total of 239 viewers (credit and non-credit) "participated" in the TV course. The average cost to transmit this service on the part of the seven school districts was $5.86 per student.

The school districts cost to deliver the TV course to students taking it for credit varied from district to district, depending on enrollment and total expenditures.

The range was between $13.50 and $20.70 per student via television.

This compares to $30.00 per student in one of the regular summer schools. A small step in direct teaching, but worthy of replication.

(2) Consider another example of the use of instructional technology for another educational purpose. The problem approached was, How do we enable students in college to interact with our most talented intellectuals? The limits in doing this without technology are the time of the expert and the psychological barrier which keeps the student from approaching the expert because of the embarrassing gap between their levels of knowledge.

I find a most exciting answer to this problem described by Stewart W. Wilson, a Senior Scientist for Polaroid Corporation, in the January, 1972 issue of Technology Review. Wilson's description begins as follows:

> "One of the most natural ways for a human being to learn is to talk with a knowledgeable person--ask him questions, listen closely to the answers, and carry the conversation into directions which are personally relevant and important. Today, however, most people have few opportunities of this kind, since, as knowledge and society have become more complex, there are fewer people, proportionately, who can give good answers, and their time is in great demand.
>
> Can we find some new way to extend this interactive experience to a great many more people that at present have access to it?"

Wilson has developed the technology in answer to that question. By the use of tape recordings and electrowriter signals special lectures on complex scientific issues have been recorded by MIT professors and made available at any time. Accompanying the lecture the student has a series of key questions that have been developed by having other students listen, ask questions, and get a response on the subject. The student can pace the "conversation" with the lecturer and ask any sequence of questions, getting natural but taped responses as he sees fit. The scheme has had limited trial at the collegiate level, but the idea of shaping technology to the way in which a person naturally learns is very promising and I believe will be applicable at all ages and learning levels. One of the most important gains from this work has been that students cross the threshhold of knowledge which makes them comfortable in pursuing added contact with the distinguished professors.

(3) Another solution that is being demonstrated fits the problem of getting instructional materials to sparse and poor areas.

One of the curious aspects of funding for technology in recent years has been the difficulty in assisting schools which need it most. Because some of the existing aid programs and those of the past require matching funds or demonstrations of local effort, the poorer school districts have often been left out of the ball game. Opportunities are being provided to remedy this under the Federal Appalachia Act. After a year and a half of design, two programs for developing telecommunications networking in the Appalachia area have been approved ($785,000). A master plan calling for $5 million additional expenditure for Appalachia has been approved by the State Office of Planning Services and sent to the Appalachia Commission. We anticipate another grant to carry on the work before the end of the year. The immediate objectives of this work are to establish television transmission from the New York State Television Network into the remote areas that do not now reach Appalachia. Second, the plan will establish each of ten BOCES in the area with its own telecommunications system by which it can reach both schools and homes with local instruction and information. This is particularly important because of the geography and weather problems in all of the counties involved. Finally, the last objective is to interconnect each of these BOCES by microwave so that they may share their resources and increase the total instructional package available. The problem of delivery can be handled.

(4) Let me give now an example of financial arrangements for paying for instructional technology. Implementation of technology is always a MONEY problem.

For years the problem of getting school districts to pay for ETV school services provided by ETV Councils has been a problem. The relationship of stations to schools, the number of personnel that stations could afford to send into the field and the general lack of responsibility assumed by the schools for the continuation of broadcast school services combined to make the services of ETV Councils a losing proposition.

Several solutions to the problem have been tried by the State Education Department, including special legislation, but no improvement has been realized. Two years ago, the idea of BOCES assumption of ETV school services responsibilities was developed. A pilot project was initiated in the St. Lawrence Valley coincident with the beginning of transmission on the new ETV station in that area. The unique aspect of the plan is that a consortium of BOCES bulk purchase (by contract) a large block of air time from ETV stations in return for which they received only the technical services. BOCES then has the job of programing, setting the schedule, and directing the school service program. Reports from the schools and BOCES of the area indicate that the plan has resulted in greater satisfaction, improved financial support, and more instructional use than under previous approaches. Current State policy, which has already been promulgated to ETV stations and BOCES has established this contract method as an approved means of using ETV school services. Future BOCES aid will be approved if the BOCES assumes contract and use responsibilities of open circuit school services.

(5) These examples of particular instructional projects and of funding techniques demonstrate incremental gains that can be made. (If things seem slow to develop, think about the centuries it took to produce movable type for printing). They are successes on which to build. You can think of others. But we must also be striving to develop a breakthrough in using instructional technology in the schools for substantial periods, perhaps two or more hours per day.

The cost of maintaining public education with its intensive dependency on professional labor and elaborate plant, the rapidity of social change that is reflected in the need for continual curriculum revision, and rising costs, are three reasons why it is essential to support efforts for the design, testing and development of major instructional alternatives that can provide equal or improved educational output at a lower unit cost.

One approach to this objective is in the program for Improving Cost Effectiveness Through Instructional Technology (ICEIT). ICEIT uses a blend of commercial film, animation, music, live actors, workbooks and follow-up activities. The subjects included are art, music, social studies, consumerism, health education and science.

Half the students in a given group of elementary classes will be engaged in basic skills learning activities with a professional teacher, in the conventional classroom. The other half of the students will be engaged in activities conducted by ICEIT in a television-equipped classroom, monitored by a teacher aide.

The first experiment with ICEIT ran for two weeks in Rochester in 1970. Observed behavior of students and evaluation done by SUNY at Brockport proved favorable. Additional experiment in Baldwin two months later (June 1970) was accomplished to perfect format weaknesses observed in Rochester. Then a contract with a professional production company was made for a two-day pilot. This was tested in four school districts, Pocantico Hills, East Greenbush, Westfield and Glen Cove with unusually good results, behaviorally and instructionally.

Presently the State is cooperating with Nassau BOCES personnel to develop twenty system days. The purpose is to get a thorough confirmation of indications of good content retention over a protracted period. If this works, a planned full year's production will be the final step in confirming viability.

But enough verbal description; let me show you what can be done. Let me give you an ICEIT visual acuity test which is pitched at 3rd and 4th graders as is the other current ICEIT material. Among other things, I can show you that learning can be fun and that even a deputy commissioner can operate this equipment.

(After Tape)

I won't embarrass you by asking how good a detective you were. Did you get the shoelace? Incidentally, I used that clip at my son's 7th birthday party last week. You would be amazed at the reaction by those from 4 to 8. Even the ones who could not write, would see and remember 7 or 8 clues.

And so, there are examples of instructional technology that can be demonstrated as feasible and sound means to handle specific educational purposes. And we can demonstrate also that new delivery and financing arrangements are in use. Instructional technology is not only economical--it can result in more effective learning and force us all to reexamine all school practice against our knowledge of learning theory.

Technological capacity will grow further with developments in cable television, telecommunications satellites and computer-assisted instructional systems. I believe we agree on the policy directions. Our task is to get our proposed policy implemented by a demonstration now to legislators, government officials and the public of the power of the tools. Let me show you one more item from the ICEIT materials to show you the power of the media. It is about our environment and it is called, "Who's Garden Is This?"

(Tape On)

(On Video Tape)

I am back in the can once again. My voice and image are now in that same little cassette which gave you "Who's Garden Is This?"

That is a beautiful little item. It is a powerful and tasteful combination of a great song and performer, excellent photography and programing. It is a forceful message about the kind of garden in which we want to live.

The item is part of the ICEIT program. It is but a small sample of what can be done with this type of instructional technology. It demonstrates, as does this short clip, the magnificent tools that are available to improve education in New York State. Let us hope we have the foresight and wisdom to use them.

Thank you for inviting me to your conference. I have enjoyed being in your company this evening.

THE PRODUCTION OF A 16MM FILM ON DRUG ADDICTION BY A LOCAL COMMUNITY

by John J. Martin
Ramapo-Indian Hills
Regional High School District
Franklin Lakes, New Jersey

For a number of years as AV Coordinator in a number of school systems, I have always wanted to produce my own 16mm color, sound film on the theme of drug addiction. The obstacles were obvious and numerous, and it didn't seem like it could be done. However, little by little, events began to occur which made all the obstacles vanish.

I would like to now:

1. Go into the events leading to the production of the film.
2. Show the film (21 minutes).
3. Indicate how it can be used in a classroom situation.

I. THE PRODUCTION

1. Technical information from ex-addicts and equipment security on location by plain clothesmen of the New York City Police Department were obtained from the office of a Bronx Congressman.
2. I worked with high school students in planning the script.
3. Camera and sound equipment ($10,000) were donated rent-free from a large equipment distributor in New York City.
4. Doctors in Yonkers gave medical advice and arranged for me to use the maternity ward in a Yonkers hospital for some scenes.
5. A Bronx chapter of the Kiwanis obtained permission for me to shoot in a Bronx cemetery.
6. A Westchester college gave me permission to use their campus for a few scenes.
7. A Church drama group acted in the film without payment.
8. The musical score was written and arranged by a Westchester college student.
9. Some production costs were underwritten by a Westchester filmstrip distributor.
10. New York City high school students helped with the sound recording.
11. I wrote a proposal for this production to the New Jersey Board of Education in Trenton and received a $2,000 Mini-Grant and with my own additional funds, I was able to complete the project.

II. THE FILM

The film was shown and immediately after, I discussed with the teachers and administrators present, some of the basic film making techniques used.

III.

This film has been used quite successfully at a number of high schools. Technically, it isn't perfect, but with the proper motivation before and discussion afterwards, it has sparked quite a bit of activity from the students in spite of the minor production flaws. On and off, it took two years to produce. If I had the money now, I would make quite a few changes. But, I am proud of my adventure, and I would ask all of you not to be discouraged at undertaking a large project. Keep at it and somehow things work themselves out.

LISTENING TRAINING: FACT OR FICTION

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Technology and instruction concern themselves chiefly with visual approaches, while the auditory area is nearly wholly neglected in education. As the title of this paper implies, we will explore ways to achieve listening skills and see what we can do about it.

We have heard much in the past few years about listening. But like noise pollution, we tend to give listening much lip service but no action. Listening intersects all parts of the school curriculum, reaches into our daily lives, and will necessitate on all our parts an increasing awareness of listening in the future.

Why can't we move in directions of training? Or are we moving?

Think in your own minds back to your own school days. Were you involved in learning activities designed to teach you to listen? If so, you were indeed fortunate and were in a rare program. If not, you were no better off than the student of today.

The National Council of Teachers of English threw the spotlight on the importance of listening. The skill of listening is a requirement vital to all of us. In a study conducted by the Council, it was determined that little or no training is being carried on in our schools.

Barriers to progress in this area are reflected in some of the following comments by teachers: I never was taught to listen; I never was taught how to teach listening; I don't know where to go for help.

Let's examine listening together. Let's discover what it is and what can be done to achieve successful programs of listening training.

We can contrast listening with hearing. Hearing is a physiological process, and one which we define as sound going in one ear and out the other. Whereas, listening is a psychological process, and we define it as intelligible feedback which can be rejected, filed for future use, or used immediately.

Listening constitutes 45% of our wakened day, while speaking encompasses 30%, reading and writing cover 16% and 9% respectively. These figures shock a good many people. However, it doesn't shock them enough to move them to action. Incidentally, these figures may be verified in the Encyclopedia of Educational Research.

For purposes of clarity, we can classify listeners as being in one of three groups. Group One, the active listener, listens 80 to 90% of the time, Group Two, the intermittent listener, listens about 50% of the time, and Group Three, the passive listener, listens about 10% of the time.

Why don't people listen to each other? Perhaps because the material is presented in boring fashion, or the speaker is dull, or the audience is tired, or the material is above the intellectual capacity of the listener.

In order to listen effectively, we need to concentrate on the material being presented. To reach this peak, we must tune out all distractions and tune our minds to the same wave length as the speaker's.

Note the inference above. It is: we can only concentrate on one thing at a time. If you doubt this, try listening to your car radio in heavy traffic. If you want the sports results, weather forecast or news, fighting traffic usually results in missed communication. In this case, these are the distractions. After you leave the point of heavy traffic, you will probably

say to yourself, "I missed the news, weather, and sports."

To achieve successful concentration, we need to look at concentration as something which permits us little deviation from the focus of attention during a listening period. To concentrate requires undiminished periods of complete absorption and to be immersed fully in the topic.

As you realize, and I don't need to tell you, full concentration is hard work and tiring. Concentration is the key to successful listening, the pivotal point around which we build our paths to listening.

Moving ahead now, we can examine rates of speed as they relate to all we have talked about so far. The rates of speed apply to what we can term the speech-thought ratio. There exists a rate of speed for the thought process as a listener hears sound, and there exists a rate of speed which emanates from the source of the sound.

The average listener listens at a rate of 400 words per minute. The average speaker speaks at about 100 to 150 words per minute. We have nearly a four to one ratio in favor of the listener. We need some way to make the speech rate more commensurate with the thought speed. For, if the listener has time to think of other things while the lecturer speaks, he can very easily be lost and not come back to the speaker. Accordingly, we need some means for rescuing the listener from this dangerous possibility. Here then is partial argument for an awareness and need for effective and efficient listening and concentration.

How can we translate all of this information into action for the benefit of our students? The following suggestions may be utilized once you have formulated your direction:

Listen for a purpose. Why are you listening, is it for information, education, or recreation?

Establish the physical environment for listening. Make sure seating and ventilation are adequate. Rid the room of all possible distractions.

Listen critically. Evaluate what the speaker is saying. Participate mentally during the talk. Question his ideas and information.

Control your prejudices. Give the speaker a chance.

Get to know sounds around you. What are their meanings and relationships to you and others.

Set up practice sessions. This can be useful at home, on the job, and in school. Use panel discussions in school as well as dramatizations, group reports, and general discussions. Have the class members evaluate discussion periods. Work with tape recorders, radio, record players, and other people.

Paint "word pictures" when speaking to a group or another person. Have you ever considered that "the brain can see?" By painting "word pictures" the individual is able to visualize things previously seen or experienced. By basing our information on things learned, known, or observed, we are able to structure each sequence and build successively on each portion of information.

Practice concentrating. Rid yourself of all thoughts but one and think about it. What do you know about it, past or present? How can you apply it? Listen to radio and television broadcasts and practice disciplining your mind to grasp the information, even though the material does not interest you. In order to concentrate, we need to discover what it is. We do know it is a distinct part of the listening process. How does it fit into our pattern?

Those things which have meaning for us or interest us are the things we remember. Our awareness of things around us is determined by our preoccupation, past experience, sensory capacities, and the environment. These factors determine the level of concentration and contribute to the amount of thought we give to an event, thing, or process at a particular time.

Remember, we stated before that we can only focus successfully on one idea at a time. Therefore, you should examine those things which distract you and your students during school

hours, i.e., school cafeteria, the shop, the gymnasium, the music room, the auditorium, automobile noise, and heavy traffic. All of these combine to interfere with the learning process.

An interesting and useful technique which can be employed in listening training is an area called compressed speech. A comparatively new innovation, it holds great promise for education now and in the future.

Compressed speech, or time speeded speech, is a method whereby we can shorten the delivery time of communication via electronic means. Speeds can be varied, allowing the teacher to select the reproduction speed most comfortable for his class. In like manner, speech can also be slowed, or expanded, wherever the requirement exists. To be more precise, we can define compressed or expanded speech as a reproduction of an original recording in which the word per minute ratio is changed to a slower or faster rate of speed without eliminating the pitch or natural voice quality.

A machine which can accomplish these tasks is the VOCOM-1 compressor/expander, manufactured by PKM Corporation, Minneapolis, Minnesota.

All of the approaches mentioned here today can be implemented through the use of tape teaching, i.e., a prepared script placed on tape and used in conjunction with a headset and subsequent work sheets.

The compressed tape or normal tape can be utilized effectively. Tape teaching, recordings and script, recorded word-for-word, are usually placed in three categories.

(1) Directions. After listening to an explanation, the student is able to follow directions for completing an assignment on a worksheet. This is the simplest kind of tape to make.

(2) "Closed end." Listening and participating. The student listens to a lesson through his headset and receives "personalized" instruction. At this time he can respond simultaneously with the teacher, take notes, or respond to a worksheet through a step-by-step procedure.

(3) "Open end." The student is given an exercise which has no formal ending. He will need to pursue the topic in the form of library research and independent project work to arrive at an answer or conclusion.

Earphones, also known as headsets, are becoming the recognized symbol for individualized instruction and educational technology. Through use of the headset, interest is commanded rather than sought. The student must either listen, take notes, or be thoroughly lost. Normal classroom distractions such as coughing, shuffling of feet, movement of chairs and tables, noise from corridors, and dropping of books are eliminated by this approach. It becomes more significant for the student as he realizes this is a personalized approach. He even begins to look forward to it. He cannot relax his efforts, otherwise he will be lost.

Worksheets, created especially for the student, contain directions for carrying out an assignment and list the objectives of the specific lesson the student is engaged in. The student may complete the worksheet as the tape progresses, or it may be designed to be completed after the student has listened to the entire tape. The schema here depends on the manner in which the teacher desires to structure the taped lesson.

Techniques for creating a worksheet range from objective items to programmed materials. After completion by the student, the worksheet can be used by the teacher as an evaluative instrument as well as a source of information for future class direction.

It is not inconceivable that one day all schools will institute listening programs designed to make the ear a more effective tool for learning. At the same time, realizing that most of our wakened day is spent in listening, we should prepare our future citizenry for the continuing information explosion.

Most people today are usually in a hurry, rushing to this and that place at tremendous rates of speed. Fast automobiles replaced the horse and buggy, powerful railroad trains outraced both, and supercharged air jetliners move into the air and out of sight as quickly as a bolt of lightning. Perhaps we can attribute our lack of listening to this "jet age," realizing that this pitfall contributes generously toward preventing growth and full utilization of this static human tool called listening. I offer hope in this direction. Remember, we did reach the moon.

Thank you for listening.

EXHIBITORS

Grossinger's November 7-10, 1972

The New York State Educational Communication Association and the Division of Research and Educational Communications, State Education Department, in cooperation with industry, presented one of the largest displays of instructional media in the country. As an integral part of the Annual Convocation, the commercial members of the Association demonstrated and presented current information on the latest ideas, equipment, materials and media services.

Sincere thanks and appreciation to the following exhibitors for joining us and making available to the participants of the Convocation their many fine and innovative products.

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1330 Avenue of the Americas
New York, New York 10019

ACI Films, Inc.
35 West 46th Street
New York, New York 10036

Adwell Audio Visual Co.
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Bellerose, New York 11426

Aims Instructional Media Services, Inc.
P.O. Box 1010
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ALESCO
404 Sette Drive
Paramus, New Jersey 07652

American Educational Films
331 North Maple Drive
Beverly Hills, California 90210

AMNEC Corp.
670 White Plains Road
Scarsdale, New York 10583

Athletic Institute
705 Merchandise Mart
Chicago, Illinois 60654

Atlantis Productions, Inc.
850 Thousand Oaks Blvd.
Thousand Oaks, California 91360

Audio Visual Systems
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A-V Communications, Inc.
65 Orville Drive
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New York, New York 10036

BFA Educational Media
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Santa Monica, California 90404

Borg-Warner Educational Systems
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Niles, Illinois 60648

Boston University Film Library
765 Commonwealth Avenue
Boston, Massachusetts 02215

Bouton's Audio-Visual Sales
13 North Main Street
Pearl River, New York 10965

R. R. Bowker
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New York, New York 10036

Bro-Dart, Inc.
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Carousel Films, Inc.
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New York, New York 10036

CCM Films
34 MacQuesten Parkway South
Mount Vernon, New York 10550

The Center for the Humanities
2 Holland Avenue
White Plains, New York 10603

Centron Educational Films
West Ninth at Avalon Road
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Lawrence, Kansas

Churchill Films
Hans Van Sluizer
5800 Arlington Avenue 8K
Riverdale, New York 10471

Charles W. Clark Co.
564 Smith Street
Farmingdale, New York 11735

Classroom Filmmaking Resources
250 West 64th Street
New York, New York 10023

Jack C. Coffey Co., Inc.
104 Lake View Avenue
Waukegan, Illinois 60085

Colortone Camera, Inc.
76 So. Central Avenue
Elmsford, New York 10523

Columbia Ribbon and Carbon Co.
Herb Hill Road
Glen Cove, New York 11542

Columbia University Press
562 West 113th Street
New York, New York 10025

Concord Communications Systems
23-08 Jackson Avenue
Long Island City, New York 11101

Coronet Instructional Films
65 East South Water Street
Chicago, Illinois 60601

CRM Educational Films
1104 Camino Del Mar
Del Mar, California 92014

Delaware Audio Visual Distributors
2635 Delaware Avenue
Buffalo, New York 14216

DEMCO Educational Corporation
Box 1488
Madison, Wisconsin 53701

Dictation Disc Co.
240 Madison Avenue
New York, New York 10016

Education in Motion, Inc.
100 Brooklyn Avenue
Massapequa, New York 11758

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1937 Grand Avenue
Baldwin, New York 11510

Educational Dimensions Corp.
Box 146
Great Neck, New York 11023

Educational Technology, Inc.
2224 Hewlett Avenue
Merrick, New York 11566

Electronic Communications
Systems, Inc.
P.O. Box 283
Oneonta, New York 13820

Encyclopedia Britannica
Educational Corp.
180 E. Post Road
White Plains, New York 10601

Eye Gate House
146-01 Archer Avenue
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Films, Inc.
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Wilmette, Illinois 60091

GTE Information Systems
Chester, Connecticut 06412

Guidance Associates
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Pleasantville, New York 10570

Harwald Co.
1245 Chicago Avenue
Evanston, Illinois 60602

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Oswego, New York 13126

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383 Madison Avenue
New York, New York 10017

Instructional Industries, Inc.
Executive Park
Ballston Lake, New York 12019

International Filmtreat
733 Third Avenue
New York, New York 10017

International Film Foundation, Inc.
475 Fifth Avenue
Room 916
New York, New York 10017

Irish Magnetic Recording Tape
270 Newtown Road
Plainview, New York 11803

Journal Films
Bill Murray
9123 86th Drive
Woodhaven, New York 11421

L. Kaltman and Sons, Inc.
77 Mill Lane
Mountainside, New Jersey 07092

Learning Corporation of America
711 Fifth Avenue
New York, New York 10022

Medical Focus, Inc.
142 Mineola Avenue
Roslyn Heights, New York 11577

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Princeton Road
Hightstown, New Jersey 08520

Modern Film Rentals
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New York, New York 10036

Multi-Media Materials Co., Inc.

National Audiovisual Center
National Archives and Records Service
General Services Administration
Washington, D. C. 20409

NBC Educational Enterprises
30 Rockefeller Plaza
New York, New York 10020

A. J. Nostrom and Co.
3333 Elston Avenue
Chicago, Illinois 60618

New York Telephone Co.
140 West Street
New York, New York 10007

NYU Film Library
41 Press Annex
Washington Square
New York, New York 10003

Oxford Films, Inc.
1136 North Las Palmas
Los Angeles, California 90038

Paillard Inc.
1900 Lower Road
Linden, New Jersey 07036

Panasonic
200 Park Avenue
New York, New York 10017

Paulmar Co., Inc.
464 Central Avenue
Northfield, Illinois 60093

Pflaum/Standard
38 West Fifth Street
Dayton, Ohio 45402

Polocoat, Inc.
9750 Conklin Road
Cincinnati, Ohio 45242

Pyramid Film Producers
P.O. Box 1048
Santa Monica, California 90406

Ra-Lin, Inc.
925 Burnet Avenue
Syracuse, New York 13203

Radio-Matic of America, Inc.
760 Ramsey Avenue
Hillside, New Jersey 07205

RCA Records
Educational Sales
1133 Avenue of the Americas
New York, New York 10036

RCA Service Co.
Building 203-3 Dept. 1614
Camden, New Jersey 08101

Research Media, Inc.
4 Midland Avenue
Hicksville, New York 11801

Research Technology, Inc.
8260 North Elmwood Avenue
Skokie, Illinois 60076

Round Table Films, Inc.
113 North San Vicente Blvd.
Beverly Hills, California 90211

Sargent-Welch Scientific Co.
7900 Northern Linden Avenue
Skokie, Illinois 60076

Scott Education Division/Scott Graphics
104 Lower Westfield Road
Holyoke, Massachusetts 01040

Shibaden Corp. of America
58-25 Brooklyn-Queens Expressway
Woodside, New York 11377

Snapshooter Camera, Inc.
9810 Ashton Road
Philadelphia, Pa. 19114

Sonocraft Corp.
29 West 36th Street
New York, New York 10018

Sony Corporation of America
47-47 Van Dam Street
Long Island City, New York 11101

Sound Systems, Inc.
42-12 28th Street
Long Island City, New York 11101

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Montville, New Jersey 07045

Starex, Inc.
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Kearny, New Jersey 07033

Sterling Educational Films
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New York, New York 10016

Stickley Silver, Inc.
P.O. Box 1150
Binghamton, New York 13902

Sunburst Communications, Inc.
Pound Ridge, New York 10576

SVE/Singer
1345 Diversey Parkway
Chicago, Illinois 60614

Telemation
P.O. Box 15068
Salt Lake City, Utah 84115

Telex/Communications Division

Texture Films
1600 Broadway
New York, New York 10019

Troll Associates
320 Route 17
Mahwah, New Jersey 07430

3M Magnetic Products Division
700 Grand Avenue
Ridgefield, New Jersey

3M Mincom Division
15 Henderson Drive
W. Caldwell, New Jersey 07006

3M Business Products Sales
70 Eisenhower Drive
Paramus, New Jersey 07652

Tuthill's Audio-Visual Center
412 Chenango Street
Binghamton, New York 13901

Urban Media Materials
212 Mineola Avenue
Roslyn Heights, New York 11577

Valiant Instructional Materials, Corp.
237 Washington Avenue
Hackensack, New Jersey 07602

Viewlex, Inc.
Broadway Avenue
Holbrook, New York 11741

Video Circuits, Inc.
3 Westchester Plaza
Elmsford, New York 10523

Video Graf, Inc.
100 Cabot Street
Needham, Massachusetts 02192

V-M Educational Systems
P.O. Box 205
North Syracuse, New York 13212

Walt Disney Educational Materials Co.
10 Richard Street
Jersey City, New Jersey 07505

Warren Schloat Productions, Inc.
Pleasantville, New York 10570

Westchester AV Center
173 Summerfield Street
Scarsdale, New York 10583

Wombat Productions, Inc.
77 Tarrytown Road
White Plains, New York 10607

Xerox Films
High Ridge Road
Stamford, Connecticut 06905

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